The Franciscan Educational Conference

VOL. XV NOVEMBER, 1933 No. 15

REPORT

OF THE

FIFTEENTH ANNUAL MEETING

MARATHON, WISCONSIN

JUNE 30th, JULY 1st, 2nd, 1933

IN SANCTITATE ET DOCTRINA

PUBLISHED BY THE CONFERENCE

Office of the Secretary
CAPUCHIN COLLEGE
BROOKLAND, WASHINGTON, D. C.

Fifteenth Annual Meeting of the Franciscan Educational Conference, Marathon, Wis., June, 30—July 2, 1933.

LEFT TO RIGHT—BOTTOM ROW: 1. Gilbert Heuel, Marathon, Wis.; 2. Sylvester Brielmaier, Marathon, Wis.; 3. Claude Vogel (Secretary), Washington, D. C.; 4. Thomas Plassmann (President), St. Bonaventure, N. Y.; 5. Dominic Meyer, Marathon, Wis.; 6. Giles Kaczmarek (Vice-President), Grandby, Mass.; 7. Hubert Vecchierello, St. Bonaventure, N. Y.; 8. Sebastian Erbacher (Editor), Detroit, Mich.

MIDDLE ROW: 1. Vincent Kroger, Detroit, Mich.; 2. Henry Barth, Mt. Calvary, Wis.; 3. Norbert Miller, Washington, D. C.; 4. Isidore Cwiklinski, Sturtevant, Wis.; 5. Matthew Baran, Athol Springs, N. Y.; 6. Emil Brum, Detroit, Mich.; 7. Clement Barczak, Sturtevant, Wis.; 8. Casimir Stec, Burlington, Wis.; 9. Raphael Vonder Haar, Santa Barbara, Calif.

TOP ROW: 1. Boniface McConville, St. Bonaventure, N. Y.; 2. Hyacinth Barnhardt, St. Bonaventure, N. Y.; 3. Pancratius Krieg, Garrison, N. Y.; 4. Pascal Ahearn, Marathon, Wis.; 5. Berard Sczesny, Grandby, Mass.; 6. Anaclete Sutherland, St. Bonaventure, N. Y.; 7. Thomas Aquinas Heidenreich, Garrison, N. Y.; 8. Raphael Poeppel, Mt. Calvary, Wis.

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CUM PERMISSU SUPERIORUM

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CONSTITUTION

OF THE

Franciscan Educational Conference

Adopted at the final meeting of the Franciscan Educational Conference, St. Louis, Mo., July 2, 1919.

ARTICLE I

NAME AND OBJECT

SECTION 1. The name of this organization shall be: "The Franciscan Educational Conference."

SECTION 2. The general object of this Conference shall be to safeguard the principles and to promote the interests of Catholic Education.

SECTION 3. The particular object shall be:

a) To encourage the spirit of mutual helpfulness and coöperation among the Friar educators of the American provinces;

b) To advance by study and discussion the Franciscan educational work in all its departments;

c) To offer means and incentives toward the advancement of learning and the pursuits of literary work among the Friars.

ARTICLE II

DEPARTMENTS

SECTION 1. The Conference shall consist of three departments: The Classical, the Philosophical, and the Theological Department.

ARTICLE III

OFFICERS AND THEIR ELECTION

SECTION 1. The Officers of the Conference shall be a President, a Vice-President, and a Secretary.

SECTION 2. These officers shall be elected separately, by secret ballot, in the last session of each convention, a simple majority deciding the successful candidate. If, after two ballots, no election has been effected, the two having the greatest number of votes, shall be the exclusive candidates in the third ballot. In case two candidates receive an equal number of votes, the senior Friar shall have the preference.

ARTICLE IV

Duties of Officers

Section 1. The President shall preside at all the meetings of the Conference and of the Executive Board.

Section 2. The Vice-President shall preside at these meetings in the absence of the President.

Section 3. The Secretary shall record and keep all matters pertaining to the Conference. He shall make due announcement of meetings and make the necessary preparation for them. He shall finish all the business of the previous meeting.

ARTICLE V

The Executive Board

Section 1. The three officers aforementioned shall ex officio constitute an Executive Board.

Section 2. The Executive Board shall have the management of the affairs of the Conference. It shall be invested with power to make the regulations regarding the writing, reading, and publishing of the papers of the Conference meetings.

Section 3. It shall interpret the Constitution, By-Laws, and Regulations of the Conference, and, in matters of dispute, its decision shall be final. It shall also have the power to appoint the various committees of the Conference.

Section 4. The outgoing officers shall finish all the business of the previous convention.

ARTICLE VI

Conventions

Section 1. The Conference shall convene at such time, place and interval as may be determined by the Very Rev. Provincials in their annual meeting.

ARTICLE VII

Amendments

Section 1. This Constitution may be amended by a two-thirds majority vote in any general session of the Conference, provided such amendment has been presented in writing and announced in a previous general session.

ARTICLE VIII

By-Laws

Section 1. By-Laws which are not inconsistent with this Constitution may be adopted by a majority vote in any general session of the Conference.

Amendment

The Executive Board shall consist of the President, the Vice-President, and the Secretary. The aforementioned officers, in turn, shall designate as associate officers one member from each Province affiliated to the Conference, and not yet represented on the Executive Board.

Amendment

On the occasion of the Annual Conference there shall be at least one Executive Session of the Executive Board and of the associate officers. In case anyone of them is absent, the senior member of his Province or Commissariat shall have his place and vote.

Amendment

The Executive Board shall be augmented by one more member, *viz.*, a Secretary for Franciscan Literature. He shall act as Chairman on the Committee for Franciscan Literature at the Conference and, under the direction and with the authority of the Executive Board, shall promote and edit the "Franciscan Studies."

Amendment

In order to insure the continuity, efficiency and a more active representation of the Franciscan Educational Conference, the election of officers shall proceed as follows:

The three branches of the Order shall be represented on the Executive Board on the basis of the number of Provinces affiliated, i. e., two officers shall be chosen from the Friars Minor (with nine affiliated Provinces), one from the Minor Capuchins (with five affiliated Provinces), and one from the Minor Conventuals (with four affiliated Provinces).

The election shall be preceded by nomination and free discussion from the floor.

No one shall be elected who has not attended at least one previous Meeting of the Conference.

All officers shall serve at least two years, and not more than two new officers shall be elected each year.

FRANCISCAN EDUCATIONAL CONFERENCE

FIRST SESSION

Marathon, Wisconsin, June 30, 1933, 8.00 p. m.

The first session of the Fifteenth Annual Meeting of the Franciscan Educational Conference was called by the Rev. Thomas Plassmann, O.F.M., President of the Conference, on June 30, 1933, at 8.00 p. m., in the auditorium of St. Anthony's Monastery, Marathon, Wis.

There were present: Rev. Thomas Plassmann, O.F.M., St. Bonaventure, N. Y.; Rev. Dominic Meyer, O.M.Cap., Marathon, Wis.; Rev. Gilbert Heuel, O.M.Cap., Marathon, Wis.; Rev. Thomas Acquinas Heidenreich, O.M.Cap., Garrison, N. Y.; Rev. Ferdinand Stippich, O.M.Cap., Marathon, Wis.; Rev. Emil Brum, O.F.M., Detroit, Mich.; Rev. Vincent Kroger, O.F.M., Detroit, Mich.; Rev. Casimir Stec, O.F.M., Burlington, Wis.; Rev. Isidore Cwiklinski, O.F.M., Sturtevant, Wis.; Rev. Clement Barczak, O.F.M., Sturtevant, Wis.; Rev. Sebastian Erbacher, O.F.M., Detroit, Mich.; Rev. Sylvester Brielmaier, O.M.Cap., Marathon, Wis.; Rev. Pancratius Krieg, O.M.Cap., Garrison, N. Y.; Rev. Hyacinth Barnhardt, O.F.M., Butler, N. J.; Rev. Boniface McConville, O.F.M., St. Bonaventure, N. Y.; Rev. Pascal Ahearn, O.M.Cap., Marathon, Wis., Rev. Raphael Poeppel, O.M.Cap., Mt. Calvary, Wis.; Rev. Giles Kaczmarek, O.M.C., Grandby, Mass.; Rev. Matthew Baran, O.M.C., Athol Springs, N. Y.; Rev. Berard Szczesny, O.M.C., Grandby, Mass.; Rev. Raphael Vonder Haar, O.F.M., Santa Barbara, Calif.; Rev. Henry Barth, O.M.Cap., Mt. Calvary, Wis.; Rev. Anaclete Sutherland, O.F.M., St. Bonaventure, N. Y.; Rev. Hubert Vecchierello, O.F.M., St. Bonaventure, N. Y.; Rev. Aloysius Costa, O.F.M., Lowell, Mass.; Rev. Norbert Miller, O.M.Cap., Washington, D. C.; Rev. Claude Vogel, O.M.Cap., Washington, D. C.

The President presented the Rev. Dominic Meyer, O.M.Cap., who in the absence of the Very Rev. Pacificus Raith, O.M.Cap., Guardian of the local monastery, welcomed the delegates with true Franciscan cordiality. The President responded with words

of kindred sincerity assuring the Friars of Marathon of the deep appreciation of all the delegates. The Secretary now submitted his report. The minutes of the Fourteenth Annual Meeting were adopted as printed in the Report and a rising vote of thanks was tendered the Secretary. Fifteen hundred copies of the Report of the Fourteenth Annual Meeting were printed and approximately one thousand copies were either distributed or sold. One thousand copies of the Report of the Bibliographical Institute were also printed and distributed by the chairman of this committee. Moreover, in co-operation with the Editor, the Rev. Sebastian Erbacher, O.F.M., one new number of the "Franciscan Studies" was published. This number entitled: *Pontificia Americana*, is a collection of Papal bulls and decrees relating to the Church in America from 1784-1884. This is the first work of its kind to be published in America and both the collection of bulls and the commentary of the author make it a welcome contribution to American Church history. The total expenses of the Conference for the past year were $1,030.00.

Aware of their interest in the proceedings of the Franciscan Educational Conference, the Very Rev. Raphael Huber, O.M.C., former Vice-President of the Conference and now confessor for English-speaking pilgrims at St. Peter's, Rome, presented to Their Eminences, Cardinal Ehrle and the late Cardinal Ceretti, specially bound copies of the Fourteenth Annual Report accompanied by the following letter:

COLLEGIO DEI PENITENZIERI
Piazza Scossa Cavalli 145,
Roma, (113) Italia

Jan. 12, 1933.

Your Eminence:

With the compliments of the Secretary of the Franciscan Educational Conference, I have the honor and pleasure of presenting herewith to Your Eminence the enclosed copy of the Report of the Fourteenth Annual Meeting of the Conference held at Carey, Ohio, U. S. A., on June 30–July 2, 1932.

Requesting the blessing of Your Eminence on the Conference and its deliberations, I beg to remain,

Most respectfully in Christ,

FR. RAPHAEL HUBER, O.M.C.,
Confessor at St. Peter's Basilica.

Under date of January 15, 1933, His Eminence, the late Cardinal Ceretti, addressed the following note to the Rev. Raphael Huber, O.M.C.:

Il Cardinale Cerretti ringrazia il Rev. P. R. Huber della copia del Report of the Annual Meeting of the Franciscan Educational Conference e la prega di ringraziare da parte sue anche il Segretario della Conferenza.

On January 22, 1933, Cardinal Ehrle, despite his more than eighty years, graciously penned the following line of grateful acknowledgment:

Il Cardinale Ehrle ringrazia graditissimo dono.

The Secretary presented the following communications:

DOMINICAN HOUSE OF STUDIES
487 Michigan Ave., N. E.
Washington, D. C.

Nov. 19, 1932.

Dear Father Claude:

Thank you for the Report of the Fourteenth Annual Meeting of the Franciscan Educational Conference. In reading it I lived over again the eleven years I spent with our own young hopefuls during the high-school and two years of college which precede admission to the novitiate. I think so well of these studies that I am imposing on your goodness to ask that a copy be sent to Fr. George Smith, O.P., Guzman Hall, Providence College, Providence, R. I., and to Fr. Dalmatius Marrin, O.P., Aquinas College, Columbus, Ohio. I suppose one was sent to our Provincial, in New York. If not please send him one as I know he will appreciate it.

With a prayer for the continuation of the good work of the conference, I am,

Sincerely in Christ,

JUSTIN McMANUS, O.P.

OFFICE OF THE DIOCESAN SUPERVISOR OF SCHOOLS
75 Union Park St.,
Boston, Mass.

November 22, 1932.

The Reverend Claude Vogel, O.M.Cap.,
Capuchin College,
Washington, D. C.

My dear Father Vogel:

I deeply appreciate your kindness in sending me a copy of the report of the Fourteenth Annual Meeting of the Franciscan Educational Conference.

I know that I shall find the present volume as instructive and inspirational as its predecessors.

Very sincerely yours,

RICHARD J. QUINLAN,
Diocesan Supervisor of Schools.

MARQUETTE UNIVERSITY
Milwaukee, Wis.

Nov. 22, 1933.

Dear Rev. Father:

Sincere thanks for sending me the Report of the latest Conference. All these Reports are inspiring.

Your sincerely in Domino,

F. S. BETTEN, S.J.

CAPUCHIN MONASTERY
Garrison, N. Y.

Nov. 23, 1932.

Rev. Claude Vogel, O.M.Cap.,
Capuchin College,
Washington, D. C.

Dear Rev. Father:

With the Report of the Fourteenth Annual Meeting of the Franciscan Educational Conference, I accept the debt of gratitude for a group of most timely topics ably presented and discussed, neatly collected for frequent perusal, enjoyment and profit.

Gratefully in St. Francis,

ANTONINE WILMER, O.M.Cap.

FRANCISCAN FRIARS OF THE ATONEMENT
Graymoor, Garrison, N. Y.

November 23, 1932.

Very Rev. Father Claude
Capuchin Monastery,
Brookland, D. C.

Very Reverend and dear Father:

The Franciscan Friars of the Atonement acknowledge with grateful thanks the Report of your Fourteenth Annual Meeting. We assure you that we take a keen interest in everything Franciscan, and read from cover to cover the scholarly discussions contained in the Report.

As regards affiliation of Seraphic Seminaries, I am glad that you uphold Franciscan traditions in maintaining that uniqueness so admirable in the followers of St. Francis.

Praying God to bless all your undertakings, I am,

Fraternally yours,

FR. DOMINIC KENNY, S.A.
Secretary.

REDEMPTORIST FATHERS
3512 Ninth St., N. E.,
Washington, D. C.

Nov. 25, 1932.

The Rev. Fr. Claude Vogel, O.M.Cap.,
Capuchin College,
Washington, D. C.

Dear Fr. Claude:

Please accept my heartfelt thanks for the Report of the Franciscan Educational Conference. It is intensely interesting and instructive. The subject: "Our Seraphic Seminaries," is most timely and the papers and discussions in the Report treat of problems that confront our own Preparatory Seminaries. As soon as I absorb as much as I can of this valuable matter, I shall send the Report to the President of our own Conference so as to interest him in this valuable information.

With fraternal greetings,

JAMES BARRON, C.SS.R.

THE CATHOLIC UNIVERSITY OF AMERICA
Washington, D. C.

November 25, 1932.

Rev. Claude Vogel, O.M.Cap.,
Capuchin College,
Brookland, D. C.

Dear Doctor Vogel:

I write to thank you for sending me the Report of the Fourteenth Annual Meeting of the Franciscan Educational Conference and to congratulate you on the record of progress which its pages present. I note, in addition to the scholarly papers submitted to the Conference, a very important feature in the shape of an extended Bibliography. This, I am sure, will be welcomed by the Franciscan members and by educators in general.

With every good wish for continued success in your fine undertaking, I am

Very faithfully yours,

EDW. A. PACE.

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141 East Twenty-Ninth Street
New York

November 28, 1932.

Dear Father Vogel:

I am very grateful to you for sending me the Report of the Fourteenth Annual Meeting of the Franciscan Educational Conference. It is of great help in our editorial work, the list of writings particularly.

One of my great consolations during illness the past four months was to think of the remarkable progress made by almost every element in the Church, during the past quarter of the century.

Sincerely,

JOHN J. WYNNE, S.J.

NUNTIATURA APOSTOLICA,
Dublin, Ireland

December 1, 1932.

Rev. dear Father:

Let me thank you for your thoughtfulness in sending me the Report of the Fourteenth Annual Meeting of the Franciscan Educational Conference. I welcome and enjoy these various studies.

Fraternally and gladly yours in St. Francis,

✠ PASCAL ROBINSON, O.F.M.

AQUINAS APOSTOLIC SCHOOL
557 Mt. Vernon Ave.,
Columbus, Ohio

December 8, 1932.

The Rev. Claude Vogel, O.M.Cap.,
Capuchin College,
Brookland, Washington, D. C.

Reverend and dear Father:

Many thanks for the report of the 14th Annual Meeting of the Educational Conference which you kindly sent me at the request of Father McManus. It contains much valuable information and I feel that it will prove a great source of help to us in the work of preparing boys for the order of St. Dominic.

With best wishes for success in your work, I remain

Very sincerely yours,

REV. W. D. MARRIN, O.P.

1248 Newton St., N. E.,
Washington, D. C.

December 20th, 1932.

My dear Father Claude:

I am grateful to you for sending me a copy of the Report of the Fourteenth Annual Conference. I was especially interested in the two papers on *Seraphic Training* and on *Conditions for Admission to the Seraphic Seminaries*; but the papers and discussions treating of the other very important matters were clearly based on careful study and offer suggestions for other than the Seraphic Seminaries and their staffs. The fine work of the Annual Conferences continues in unabated strength and fruitfulness.

Sincerely yours,

H. T. HENRY.

ST. VINCENT ARCHABBEY
Latrobe, Pa.

December 23, 1932.

Very Rev. Claude Vogel, O.M.Cap.,
Capuchin College,
Washington, D. C.

Very Rev. and dear Father:

Several weeks ago I received the Report of the Fourteenth Annual Meeting of the Franciscan Educational Conference. Sincere thanks for the instructive and eminently practical booklet. It shows that the *Nova et Vetera* can be well joined in modern educational and religious training to recruit men for the Order who are able to cope with the questions of the times and imitate the heroes of the past who excelled especially in sanctity. Even the financing of a Seraphic House of Studies is not forgotten and many a Superior will read it with the words of our good founder in mind: *Prius est esse quam philosphari.*

With the best wishes for the feast

Yours sincerely in Christ,

FELIX FELLNER, O.S.B.

PROVINZIALAT DER SÄCHSISCHEN
FRANZISKANERPROVINZ
VOM HL. KREUZ

Werl i. W., den 24. Dez. 1932.
Kr. Soest

Hochwürdiger, lieber P. Sekretär!

Der gütigst übersandte 14. Konferenzbericht ist mir eine willkommene Weihnachtsgabe. Ich gratuliere zu den vielseitigen und gründlichen Arbeiten, die wiederum geleistet sind. Der neue Band gibt uns gleich seinen Vorgängern so manche wertvolle Anregung für Erziehung und Unterricht, für die ich Ihnen und allen Mitarbeitern herzlichst danke. Möge Gottes reichster Segen Ihre Arbeit für die seraphische Jugend auch im neuen Jahre begleiten.

Mit innigem Weihnachtsgruss bin ich

Ihr ergebenster,

FR. EPHREM RICKING, O.F.M.,
Provinzial.

ST. PETER'S COLLEGE
Agra, India

December 26, 1932.

Dear Dr. Vogel:

Many, many thanks for the Report of your last Conference. It is a mine of most valuable information and we know we shall profit much from its pages.

Fraternally,

FR. HYACINTH, O.M.Cap.

ST. CHARLES SEMINARY
Overbrook, Philadelphia, Pa.

Dec. 27, 1932.

The Very Rev. Claude Vogel, O.M.Cap., Ph.D.,
Capuchin College,
Brookland, Washington, D. C.

My dear Doctor Vogel:

The Report of the 14. Annual Meeting of the Franciscan Educational Conference is at hand and as welcome as its predecessors which grace the shelves of my library and prove useful and instructive in many ways. I sincerely thank you for your kindness. Though this year's meeting has dealt with what might be called family affairs of the Order, perusal of the several papers has convinced me that we can all profit by your discussions. After all, our educational problems are basically the same and what has stood the test in one case can very readily be adapted to another situation. Speaking for myself, I gladly confess that I have derived great benefit from the articles on Vocations, Discipline and Spiritual Direction, Quality and Preparation of the Teacher and Fostering Love of Study. Knowing the Franciscan spirit, I am certain that it is your intention to allow others to share the fruits of your labors and experiences.

With best wishes,

I am gratefully and fraternally yours,

C. BRUEHL.

SULPICIAN SEMINARY
Washington, D. C.

Dec. 28, 1932.

Dear Fr. Claude:

Allow me to thank you for the late Report. Your problems are our problems and we can surely derive great help from these papers and discussions written by such capable men.

Sincerely,

A. VIEBAN.

THE CATHOLIC UNIVERSITY
Peking, China

December 30, 1932.

Claude Vogel, Secretary,
Capuchin College,
Washington, D. C., U. S. A.

Reverend and dear Father:

The Library of the Catholic University of Peking would like to exchange the annual Bulletin of the Catholic University of Peking for the annual Bulletin of the Franciscan Educational Conferences.

Under separate cover we are sending you a copy of our last Bulletin.

Respectfully and sincerely yours,

TERENCE J. CARROLL, O.S.B.

Dorsten i/Westf., den 22. Jan. 1933.
Franziskanerkloster.

Hochwürdiger, lieber P. Sekretär!

Von Herzen danke ich Ihnen für die freundliche Zusendung des Berichtes Ihrer 14. Lektorenkonferenz. Mannigfach und schwierig und zugleich von der größten Tragweite für das Wohl der Ordensprovinzen sind die Fragen, die heute an die Leitung unserer seraphischen Kollegien heran treten. Ihr Bericht wird gewiß als eine willkommene Gabe und ein guter Berater von dieser Seite besonders freudig begrüßt werden.

Hochachtungsvoll,

P. ERICH WEGERICH,
Lect. Glis.

UNIVERSITA CATTOLICA DEL S. CUORE,
Milano (108) Via S. Agnese 2.

Feb. 1, 1933.

Dear Rev. Father:

We are grateful for the Report of the Fourteenth Annual Meeting of your Conference. It is a real acquisition for our library and may we ask you to continue sending it?

With best wishes,

AGOSTINO GEMELLI, O.F.M.,
Rector.

OLINDA, BRASILIEN

15 Februar, 1933.

Hochw. P. Sekretär:

Zu meiner groszen Freude erhielt ich auch in diesem Jahre den Bericht der 14. Lektoren Konferenz der amerikanischen Mitbrüder. Gründlich und anregend wie immer werden die Darlegungen auf weite Kreise befruchtend einwirken.

Indem ich Ihnen für die Zusendung meinen herzlichsten Dank ausspreche, Verbleibe ich

Ihr in Christo ergebener,

FR. MATHIAS FEVES, O.F.M.

RIO NEGRO

Feb. 21, 1933.

Dear Fr. Claude:

On my return from Rio de Janeiro I found the Report of the Fourteenth Annual Meeting of your Conference. We are all interested in this work and your Report will be of the greatest help in carrying out our own educational duties.

Fraternally and gratefully,

FR. CHRYSOSTOM ADAMS, O.F.M.

SERAFIJNSCH SEMINARIE,
Patres Kapucijnen,
Langeweg (N.-Br.).

March 21, 1933.

Dear Rev. Father:

The Report of your Annual Conference came as a welcome gift. As might be expected, we are interested in the opinions of our American brethren and the papers and discussions in your Report give us a new outlook on the various questions of moral and scientific education. Your example has been very beneficial to us, for we, too, now make efforts to secure a greater co-operation on the part of all our teachers.

Fraternally and gratefully,

FR. ROMUALD, O.M.Cap.

CURIA GENERALIS FF. MINORUM CAPUCCINORUM,
Via Boncompagni, 71, Roma (125).

28 March, 1933.

My Dear Father Claude:

I fear I am late in thanking you for the copies of the Fourteenth Report of the Educational Conference you were good enough to send me. I have read the papers and the discussions with the greatest interest and have found them very informative and practical. The Superiors General of the Order follow with the keenest interest every step taken to place our Seraphic Seminaries on a high spiritual and intellectual level.

Wishing you and your confreres of the Franciscan Educational Conference every success in your noble work, I am

Yours fraternally in S. Francis,

FR. SYLVESTER OF TASSON, O.M.Cap.,
Definitor General.

After these preliminaries the Chairman introduced the subject of this year's Meeting, "Modern Thought." He said in part: "We have now practically covered the entire program of studies with the result that we have compiled an encyclopedia not only of Franciscan education but of education in general. We are now ready to take up the subjects of the day and to offer to the Church the Franciscan arm in defense of her age-old principles and ideals. Our present program is especially opportune since its purpose is to enlist the serious and practical interest of the Friars in the Holy Father's program of Catholic Action which calls for vigorous attacks on the philosophical errors of the day. All of us realize that the press, the radio, the workshop, the street, the parlor, the school and even many pulpits of America are infested with

trends of thought both erroneous and unholy. Therefore, the Friars can render no better service to the Holy See and to the Seraphic Order than by gathering their intellectual forces and launching a fearless counter attack."

The first paper, "Modern Philosophy and Social Life," had been prepared by the Rev. Fr. Conrad O'Leary, O.F.M., Ph.D., of St. Bonaventure's Seminary, Allegany, New York, but in his absence it was read by his confrere the Rev. Hubert Vecchierello, O.F.M. An animated discussion on the meaning of philosophy followed this paper. The modern systems, such as Hedonism, Utilitarianism, Pragmatism and Idealism were critically examined and appraised. The merits of scholasticism were sustained but it was also stressed that without due correction of defects and reasonable adjustment to scientific advancement the system cannot be hailed as a "cure-all" for modern philosophic ills.

The Meeting adjourned at 10.30 p. m.

SECOND SESSION

Marathon, Wis., July 1, 1933, 8.00 a. m.

The Chairman read a letter addressed to the Conference by the Very Rev. Fr. Ferdinand, O.F.M. of St. Joseph's Province, Montreal, Canada, deploring the fact that unforeseen circumstances prevented this Province from sending a delegate to Marathon. However, the writer pledged the fullest co-operation of his Province with all that the Conference might project. The Chairman also read a letter from the Rev. Hugolin Lemay, O.F.M., of the Committee of the Franciscan Bibliographical Institute, announcing that since the General Chapter of the Franciscan Order held recently at Rome had approved the project of a general bibliography of the Order, the activities of our own Bibliographical Institute should halt until detailed information be received from Rome.

After announcing that a photograph of the assembled Delegates would be taken at one o'clock, the Chairman appointed the following Committees:

On Resolutions: Friars Sebastian Erbacher, Hyacinth Barnhardt, Norbert Miller, Raphael Vonder Haar, Bernard Szcesnay.

On Press and Publicity: Sylvester Brielmaier, Anaclete Sutherland, Thomas Acquinas Heidenreich, Henry Barth, Matthew Baran.

The Rev. Sylvester Brielmaier, O.M.Cap., now made a plea for the Catholic Periodical Index. This Friar pointed out that, while we lack books and pamphlets on many important subjects, there is frequently an abundance of such material hidden away in our Catholic magazines. It is here that the Catholic Periodical Index will render invaluable service by pointing out the whereabouts of such material. Fr. Sylvester also appealed for a cumulative index of the fifteen volumes of the Franciscan Educational Conference Reports, and also of the first fifty volumes of the *Annales Fratrum Minorum,* the *Analecta Ordinis Minorum Capucinorum,* and the *Commentarium Ordinis Fratrum Minorum Conventualium,* the official organs of the three branches of the Franciscan Order. To the welcome surprise of all it was announced that the Friars of Duns Scotus College of Detroit are preparing an index of our annual Reports. With regard to the publication of the other indices, the Friars of the various branches favored addressing an appeal to the respective authorities in Rome.

After these preliminaries, the Rev. Raphael Vonder Haar, O.F.M., of Old Mission, Santa Barbara, Calif., read the paper on "Objective Ethics and the Norm of Morality." Commenting on this subject the President stressed its popularity, saying that no less than five Friars had volunteered to write on it. How well the Friar from the Golden West had given the golden rule of morality was patent to all after hearing the paper. The discussion insisted on the necessity of some objective norm of morality as against the blatant subjectivism of the false philosophers. It was also urged that since schools and universities fail to teach the existence of a definite, independent norm, we the guardians of truth, should be instant in spreading a knowledge of a truth upon which the very salvation of society depends.

The next paper entitled "Some Causes Responsible for the Present Vitalistic Trend in Biology," was read by the Rev. Matthew Baran, O.M.C., A.M., S.T.D., of St. Francis College, Athol Springs, N. Y. An interesting and lively discussion ensued upon this vexed subject. Shall we hold with mechanists that life is not mysterious, that it is nothing over and above the ordinary processes of change and activity which occur in all living organ-

isms, that eventually vital activities will be analysed in terms of physics and chemistry? Or, shall we accept the view of vitalists that organization of living beings is altogether different from anything in the inorganic world, that the indeterminateness of living beings is not the result of merely mechanical factors operating in living organisms and absent in inorganic materials? Admitting the insurmounting difficulties on both sides, the consensus of opinion favored the vitalists.

The Meeting adjourned at 11.30 a. m.

THIRD SESSION

MARATHON, WIS., July 1, 1933, 3.00 p. m.

The Rev. Thomas Aquinas Heidenreich, O.M.Cap., read the paper on "The Evolution of Man," written by the Rev. Jerome Kobel, O.M.Cap., of Mary Immaculate Seminary, Garrison, N. Y. A remarkable piece of research, this paper represented a complete survey of the question in succinct but pleasing style. The discussion centered chiefly on the attitude of the Church toward the theory of evolution in general and on the evolution of man's body in particular. "Should the undeniable proof be forthcoming tomorrow that the body of the first man was evolved from lower animals, it would not be found to contradict any solemn, ordinary, or official teaching of the Church," was a conclusion to which all assented.

The paper on "Albert Einstein and Relativity; Abbè Georges Le Maitre and the Expanding Universe" was then read by the Rev. Hubert Vecchierello, O.F.M., Ph.D., of St. Bonaventure's Seminary, Allegany, N. Y. In view of the poverty of source works on these subjects the writer received high commendation for the thorough study he had made of the existing materials. All were agreed that the present paper embodied the most lucid interpretation they had ever heard regarding the Einstein theory. In the discussion the points of contact between the theory of relativity and the scholastic notions of time and space were touched upon, and both the Einstein and Le Maitre theories were examined in their influence on modern philosophic thought.

The Meeting adjourned at 5.30 p. m.

FOURTH SESSION

Marathon, Wis., July 1, 1933, 8.00 p. m.

After announcing a meeting of the Executive Board for tomorrow morning at 8.00 o'clock, and the closing meeting of the Conference at 9.00 o'clock, the President called for the paper, " The Friars in Print and on the Radio," by the Rev. Boniface McConville, O.F.M., Director of the Franciscan Fraternity, St. Bonaventure's Seminary, Allegany, N. Y.

The writer of this paper made a heartfelt plea for more extensive literary activity on the part of the Friars. He also displayed a number of pamphlets on scientific and popular subjects written by the Friars of St. Bonaventure's Seminary, Allegany, N. Y. At the same time he exhibited a collection of beautiful religious pictures artistically done and brought out by the Rev. John Forest of St. Anthony's Guild at Paterson, N. J. He rightly contended that the dissemination of similar pamphlets and pictures would in the course of time be a substantial contribution to the spread both of respect for religion and of religious truth itself. The discussion emphasized that such pamphlets, while correct in every detail, should nevertheless be written in popular, catchy style so as to enlist the interest not only of the educated but also of the man in the street. The President especially insisted that simplicity of style was most truly Franciscan and that if St. Francis and St. Anthony were present they would applaud our efforts even if St. Bonaventure and Blessed Duns Scotus might look a little askance. On this occasion he also called attention to *The Friars' Mind,* a magazine published for their Province by the lectors and clerics of the Capuchin Province of Pittsburgh. Since the origin of this periodical is linked with the similar suggestion made in the Franciscan Conference of 1924, *The Friars' Mind* must be looked upon as another good result of the Conference.

In calling for the next paper the President explained that the purpose of introducing an extraneous topic into the present meeting was to give Delegates not particularly interested in the present subject a chance to express themselves and also to help to settle on a subject for next year's Meeting. The paper on " The Prefect of Studies " was read by the Rev. Sebastian Erbacher, O.F.M., Ph.D., Prefect of studies at Duns Scotus College, Detroit Michigan. This was the first time this subject had been treated at the

Conference and the thoroughness with which the writer dealt with the various topics proved the wisdom of the choice. If one thing more than any other was brought out in the discussion it was the conviction of all that the prefect of studies is of paramount importance and even necessary in every Province. If studies are to flourish in our seraphicates and clericates it will be necessary for one man to specialize in the needs and problems of the various houses of study so as to be able to bring them to the knowledge of the responsible authorities.

The Meeting adjourned at 10.30 p. m.

FIFTH SESSION

Marathon, Wis., July 2, 1933, 9.00 a. m.

The Conference met for final business. The President read a letter addressed to the Holy Father petitioning His Holiness to name St. Anthony of Padua a Doctor of the Church. As is well known, St. Anthony was the first lector of the Order and in his sermons so powerful a defender of the faith as to merit the title, "Hammer of Heretics." In view of the recent septicentenary of the Saint's death, it was deemed fitting for the Conference to go on record for petitioning this favor. The letter was signed by all the Delegates.

The next question dealt with the advisability of the Conference starting a monthly periodical to counteract the evils of the day. The articles thus published should be of such a type as to appeal both to the learned and the unlearned. The one should read and approve, the other read and at least understand what he reads. Since the newspapers and magazines of the country continually flaunt false principles and false statements concerning the truth, the assembled Friars looked with favor upon the proposed literary countercharge and decided by vote to recommend the suggestion to the Fathers Provincial.

The Friars now took up the discussion of what should be the subject-matter of next year's Meeting, Liturgy, priestly character, Franciscan American Church history, received due consideration, but the final verdict was that next year's subject should deal with the Papal Encyclical on *Reconstructing the Social Order.*

The following Report of what the Friars have published during the year was then submitted by the Secretary:

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"A Prisoner for Christ." *Seraphic Chronicle*, Sept., 1932.

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"What Holy Communion Does for the Worthy Recipient." *Ibid.*, July, 1932.
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"L'Eucharistie." *Revue Eucharistique*, Quebec, 1931-1932.
"La Sainte Messe." *Ibid.*, 1932-1933.
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The Rev. Sebastian Erbacher, O.F.M., submitted the Resolutions which were adopted as read. The final business of the Meeting was the election of officers for the ensuing year. The following were elected by ballot:

President, Fr. Thomas Plassmann, O.F.M., Allegany, N. Y.
Vice-President, Fr. Giles Kaczmarek, O.M.C., Grandby, Mass.
Secretary, Fr. Claude Vogel, O.M.Cap., Washington, D. C.
Editor, Fr. Sebastian Erbacher, O.F.M., Detroit, Mich.

The following Friars were chosen as members of the Executive Board of the Conference: Province of the Sacred Heart, Fr. Gerard Schmalz, O.F.M.; Province of Santa Barbara, Very Rev. Turibius Deaver, O.F.M.; Province of the Assumption of the B.V.M., Fr. Casimir Stec, O.F.M.; Province of the Immaculate Conception, Fr. Aloysius Costa, O.F.M.; Canadian Province of St. Joseph, Fr. Hugolin Lemay, O.F.M.; Province of St. Joseph,

Fr. Theodosius Foley, O.M.Cap.; Province of the Immaculate Conception (England), Fr. Daniel Luitz, O.M.C.; Province of St. Anthony, Fr. Giles Kaczmarek, O.M.C.; Province of the Immaculate Conception, Fr. Francis Edic, O.M.C.; Province of Our Lady of Consolation, Fr. Paul Vollrath, O.M.C.; Province of St. Patrick, Fr. Brendan O'Callaghan, O.M.Cap.; Province of St. Louis, Canada, Fr. Fortunatus Fortin, O.M.Cap.; Province of St. Lawrence of Brindisi (England), Fr. Alfred Barry, O.M.Cap.; Province of St. Francis (Australia), Fr. Antony Grealy, O.F.M.; Province of St. Antony of Padua (England), Fr. Alphonsus Bonnar, O.F.M.

The President finally expressed perfect satisfaction for the deep interest which the Delegates had shown at all the meetings. He also renewed expression of gratitude to the Capuchin Friars of Marathon for their truly Franciscan hospitality. With this he brought the Fifteenth Annual Meeting to a close.

Fr. Claude L. Vogel, O.M.Cap.,
Secretary.

PAPERS AND DISCUSSIONS

MODERN PHILOSOPHY AND SOCIAL LIFE

Fr. Conrad O'Leary, O.F.M., Ph.D.

WHILE perusing the glorious annals of the Holy Mother Church, one finds that she has not only vanquished her assailants but that she has also profited by their attacks. True, the doctrines of the Catholic Church were from Christ, and had His promise of continuance until the end of time, but to avoid the smug satisfaction and inactivity which would gradually creep into those who propounded these dogmas, Christ permitted heresies to appear, so that the intellects of her defenders might be quickened and made ready to cope with all adversities. Similarly, though assuredly far inferior to the Church which is the guide in matters of faith, there arose, in the beginning of the ninth century that great movement in philosophy called Scholasticism. This philosophy reached the zenith of its perfection in the thirteenth century, which was made famous by the gigantic intellectual achievements of such men as St. Thomas, Scotus, Alexander of Hales, St. Bonaventure and others. As a philosophic system it has continued, at least in its essence, to a degree that is most extraordinary in a purely human undertaking. Like the Church, it has profited by the fact that it has been kept active by its many adversaries, though it would be rash to say that it has retained even partially its original grandeur as has Catholicism, because first, it was never supreme, as is the Church, and secondly, because as a philosophic system it was suffered to decay and never to regain its former prestige. Nevertheless, within the scope of its confines can be found the essence of all the true systems of thought in modern philosophy, and within those same confines can be found sound reasoning principles which refute and put to shame the whimsical theories of many of the so-called systems of modern philosophy. "It is not realized," writes Gilson, "that if there is today philosophy as such, it is to the patient work of the medieval thinkers that we owe it." They won for reason its rights, emphasizing its limitations, and their

Purpose of the Paper

work in that respect is recognized by all competent historians as a decisive event, not merely in the history of Christian thought, but in the history of human thought. The result of their work is that Scholasticism perfected an instrument of philosophic exposition that stands unrivaled, and which, compared to the babel of modern philosophic terminology, where a new writer often thinks it his duty to invent a new vocabulary, is like the sunlight compared to a London fog. In this treatise an effort will be made to show the manner in which modern philosophy has effected social life, but since, as has been mentioned, the good that is in modern philosophy is merely Scholasticism dressed in a new garb, and the error that is found therein can be most readily refuted by the sound principles of Scholasticism, our treatise might be entitled, "Scholasticism versus Modern Error."

Contemporary Testimony

In confirmation of this last statement we have the testimonies of many of the leading lights in the field of Scholasticism since its revival in 1879. Professor Bowman of Princeton, who is a man of present-day achievement and hence intimately interested in modern philosophy, says: "I find the best thought of to-day very much in conformity with the keen thinking of the Schoolmen." Professor Taylor, of Edinburgh University, in a paper read at the University of Manchester said: "If we are not all of us professed Thomists, we are all, I believe, agreed to recognize in St. Thomas one of the great master-philosophers of human history, whose thought is part of the permanent inheritance of civilized people, and whose influence is still lasting and salutary. . . . The bad habit of beginning the study of so-called 'modern' philosophy with Descartes is responsible for generations of mere fumbling in the dark, which might have been avoided if the gentlemen of the eighteenth and nineteenth centuries had been willing to do less 'sneering at Aquinas' and more study of him."

Opinion of Leo XIII

Pope Leo XIII in his Encyclical *Aeterni Patris* urged a return to Thomistic philosophy but he had too penetrating a mind to attempt to transplant into the twentieth century the effete physical science of the thirteenth. "If there be anything that ill agrees with the discoveries of a later age," he wrote, "it does not enter our mind to propose that for imitation in our day." He knew that the philosophic principles of the great Scholastics were not inseparable from

their scientific errors, and his policy was to put those principles into touch with the results of modern science. From the combination of these two elements under the careful and assiduous labor of such men as Mercier, DeWulf, Thiery and others, Thomism began to shine forth in the modern illustrations of a living, up-to-date system which took cognizance of the most recent discoveries. Formerly the attitude in many Catholic circles was to despise all modern philosophies as " the pathology of human reason," and to dismiss as absurd the teachings of Descartes, Kant, etc., without attempting to really understand their theories. The attitude of this new movement however, was to add new things to the old, to " rethink Thomism " in the light of modern discoveries. This is the true Modern Philosophy in its strictest sense and it is this combination of Scholasticism interspersed with the results of modern discoveries, that we will use as a standard to refute the many so-called systems of modern philosophy which are eating their devastating way into the heart of society to-day.

The Voice of Humanity

Men and women are flesh and blood and soul, not theory; their long experience has made them keen appraisers of the true and the false. Philosophical jargon they have never learned, but they can understand the language of the feelings. Fortunately they know that a philosophy which does not fit with life's necessities and which contradicts the cold, brutal facts of their experience may be very fascinating, but it offers no explanation of the riddles that underlie all life. That philosophy which is the heritage of the great Catholic world, can explain the riddles at which the so-called modern philosophers vainly strain.

Philosophy in Revolt

The following systems of modern philosophy, or post Reformation philosophy, as they may be called, were born of the revolt of philosophy against theology, of reason against faith. Indeed, in the first great system which was fostered in the modern era, not only was philosophy divorced from theology, but mind is placed in complete antithesis to matter. This was the philosophy of Descartes and it has characterized the whole of the modern era. Before dealing with the theories of Descartes, however, we will mention something concerning the nature and crying defects of Pantheism which preceded his work by a period of about fifty years. Viewing its defects in the proper light, the effects of this system on society are only too obvious.

Bruno's system of Pantheism tries to assure its votaries that they are gods and it has floated to us under various names. It is a scientific hypothesis under the name of monism. It is taught in Christian Science though its members would declaim it and Bernard Shaw who would like to think himself very original in all his ideas, is a diluted Pantheist. There is only one substance in the universe, a divine essence, and we are all that essence, and as such, ourselves divine.

Pantheism of Bruno

In those social circles where it has been accepted, this system of determinism has destroyed, with a quiet and effective conclusiveness, all idea of a Supreme Designer of the universe. It leaves no room for real individuality. It would deprive us of individual freedom of will and hence members of society may and have been led to commit all that long catalogue of crimes because they believe that they are a part of the deity and can not do otherwise. Thus Pantheism, that much-preached system of modern philosophy which started out to make men gods, ends by reducing God to the condition of the lowest criminal and by reeking untold devastation on society because its members would justify their crimes by perverting the human intelligence into believing that whatever man does, he does as a part of the Deity.

Some authors hold that this "masquerading with the name of God, as a cover to the practical denial of His existence," finds its most celebrated exponent in Spinoza, and they hold that he was the real founder of Pantheism, in its present form. His theories, however, have the same devasting results on society—"The supposed freedom of the human will is an illusion. Men deceive themselves in thinking they are free. We live the course of our life, and sink, to rise no more. The belief in a future life is an idle dream." His identification of God with blind and necessary substance, is worse than atheism. The fatalism involved in this system destroys all sense of responsibility, merit and moral ideas, and a society which has its principles as a guide is doomed.

Theory of Spinoza

At about this time another philosophy appeared, which had made lasting inroads into the morality of society, in the form of Utilitarianism, heralded by Machiavelli. In this system the means are to be judged exclusively with reference to the end for which they are used, with no reference to morality. It waged

Utilitarianism of Machiavelli

war upon the Christian faith saying that it was detrimental to state progress. This system was later developed into State Absolutism, by the theories of Hobbes concerning subjectivism. The founder of modern English Utilitarianism was Jeremy Bentham who held that the end of morality is "the greatest happiness of the greatest number"; "every virtuous action results in a balance of pleasure."

Utilitarianism either excludes or entirely prescinds from man's immediate relation with God and finally denies God and man's eternal destiny. It is therefore a most pernicious ethical theory and is just another of the many systems that are attempting to justify man in his greed for worldly gain and sense pleasure. In this erroneous philosophy there is a combination of altruism and egotism, sponsored presumably for the good of the state and hence, having the backing of the state in those places where it flourished, it has caused a more widespread demoralization in society.

Empiricism is a tendency toward the positivistic and practical, which was developed ultimately by Locke into a system of sensism and materialism. Unlike the idea of state absolutism carried out by Hobbes of making the individual immoral if the state desired, Locke taught independence from religious as well as state authority or egotism. This degenerating system of sensism was perfected later by Condillac who reduced all knowledge to sense experience. This again is a system which gives free rein to depravity and the way was opened for all the degradation of materialism and Individualism.

Empiricism

Individualism is the tendency to magnify individual liberty and reject external authority, not only of religious authority but standards of conduct in all activities. The conscience is the only guide of right and wrong. There are too many degrees of individualism to even call it a philosophy but the word "tendency" might be conveniently substituted. Religious individualism describes the attitude of all the reformers, or rather the so-called reformers, who broke from the authority of the Church. Such are free-thinkers and those who demand individual interpretation of Scripture. The individualism of morals or Ethical individualism as it is called has wreaked almost as much degradation on society as has religious Individualism, for they go hand in hand and the former

Individualism

always brings with it, the latter. These theories appeared first in the works of Luther and in other works of the Reformation. Then they were more scientifically classified by such men as Hobbes, Locke and particularly Rousseau. The spirit of Individualism has caused untold havoc in the ranks of religion since in it, the depraved mind finds a champion for sensual pleasures and immorality by distorting the meaning of Scriptural texts to a criminal degree, and in political affairs we find that it has developed a society which not only rejects external authority in religion but would gladly reject the authority of civil government as well. It is needless to emphasize the fatal blow the success of such principles would strike on society, and humanity can be thankful that it has the Catholic Church to ward off such a catastrophe.

For the last century two systems have been predominant by turns in the schools of modern infidelity—namely, Pantheism and Materialism. Materialism is reason abdicating her throne, which she abandons to the flesh; it is the mind compassing its own ruin, and delivering itself up as a slave to the vile desires of the body which was made to serve it; it is the soul losing consciousness of its own reality and believing itself to be part and partial with the organs of sense. In short it is man assimilated to the brutes and glorying in this assimilation. We can see the depths to which this vile philosophy brought its victims by the end of the eighteenth century when men in their pride dispising the Christian Faith, and rejecting Christianity in the interests of reason, did not hesitate to bring a "girl of the streets" upon the altar of God and call her the goddess of reason. This is but one example of the ruin that the pestilence of Materialism worked upon society, but the full extent of its ruinous effects would fill volumes.

Materialism

Materialism was vigorously combated and lost weight as a system of philosophy but many of the unbelievers renounced Materialism only to fall into the monstrous philosophy of Pantheism. This system having reappeared, the works of Spinoza, which had been long forgotten, became once more the fashion and this writer of most brutal and repulsive materialistic Pantheism was hailed as the prince of modern philosophy. This system assumed various forms but it had as its essence the principles of Spinoza and Bruno, previously mentioned. It was reason giving way to sophistry. What a blow to society to have it said that its members allowed

reason to be overthrown and become unreason or systematic folly in the licentious grasp of Pantheism, which is not even a philosophy but merely sophistry whose members lull themselves with images and a vain sound of words. This sophistry is " the process of reason overthrown, which asks the demonstration of evidence, and which in the meanwhile denies evidence; which demands the refutation of the absurd and which in the meantime affirms the absurd."

This detestable system has dealt an irreparable injury to principles and reason from the long sway which it exercised over the minds of men and this is only too obvious from the trend in the writings of many who do not profess Pantheism but still suffer from its fatal influence.

Hand in hand with and often as a result of the afore-mentioned systems of philosophy is Scepticism, or that state of the mind which denies nothing (universal scepticism) positively, but at the same time does not affirm any truth of the moral order. It very often springs from a monstrous or bitter deception, or from pride and by it the will and understanding are weakened. Fortunately, few people have fallen victims to this disease except in theory because the actual practice of its principles would lead to an absolute inertia.

Skepticism

If these systems do not lead a man to scepticism they invariably lead him to another contagion which comes in the form of Indifferentism—they do not know what to believe so they become indifferent and finally seek out whatever gives sense satisfaction. Indifferentism is divided into what may be called " Infidel " indifferentism and Liberal Indifferentism. The first type denies that it is the duty of man to worship God, by believing and practising the one true religion. Under this system comes Absolute Indifferentism which rejects the ultimate foundation of all religion. In the wake of this last system we have the philosophies of Atheism, Materialism, Pantheism, and Agnosticism which are dealt with separately but nevertheless are imbued with indifferentism. There is also a " Restricted " Indifferentism which holds all religions to be equally pleasing to God and profitable to man and the great advocate of this system is Rousseau. It is offensive not only to God, since it asserts that he would as soon be worshipped by false practices as true ones, but also to reason, because it maintains that the human

Indifferentism

intellect is indifferent as to whether it follows truth or falsehood. That part of society which is swayed by Indifferentism to-day has been greedy to accept its principles mostly because they desired to give vent to the animal passions, and being indifferent as to religion they could follow the obscene orgies of the lowest type of so-called religion. It is a type of Rationalism which makes reason the judge and is in antithesis to authority. This Rationalism carries with it, Scepticism and together they are dissolving religious faith in the Protestant ranks so that the victims are coming to possess no religion at all and the final analysis will be a struggle between paganism and Catholicism.

Following the Individualistic spirit of Lutheranism we find as a logical consequence, Rationalism. This system enthroned reason and put aside all authority except that of individual reason. Kant merely dressed up the theories of Protestantism and called them Rationalism making human reason supreme, absolute and "an end unto itself," in his theory, "the autonomy of reason." There are diverse forms of Rationalism but they are all merely different degrees of infidelity. We have but to glance at the list of non-Catholic sects to-day, to see the web of contradictory and absurd fallacies that have been woven in society as a result of the reign of reason alone.

Rationalism

Kantianism, as has been said, upholds the "autonomy of reason" as the supreme standard and law of morality. Human reason is the source of all moral obligation and moral goodness. Placing the supreme motive of human conduct within man is the same as identifying him with God, or denying the existence of God altogether. The pernicious trend of Kant's philosophy is evident in the pantheism and atheism later fostered by those whom he taught. He is also greatly responsible for the false rationalism which holds human understanding to be the sole source of truth, to the exclusion of faith in the supernatural. As we glance through the history of modern society we find that everywhere some ramification of Kantianism has left the impress of its demoralizing principles.

Kantianism

One of the most popular of modern topics of discussion is "Darwinism," but unfortunately the principles held by Darwin himself, have been sadly maltreated by those who pretended to be learned followers of the system, but who were instead, half-ignorant back-wash of the latter nineteenth century. He held the theories of Transformism, Natural Se-

Darwinism

lection, Sectual Selection and that man, body and all, including mental characteristics, was developed from some lower form. He did not lead an anti-religious life, and " in his most extreme fluctuations he was never an atheist, in the sense of denying the existence of God." Those unfortunate members of society who have tried to make Darwinism a rule of life—" a thing which was never intended by its founder "—have been the advocates of ruthlessly condemning the weak and sickly members of the race. Generally speaking, however, the theory of Darwinism has had little ill effect on society except in so far as it has been perverted by his followers and perhaps certain individuals tending toward his theories, have felt somewhat dejected while resting near the fireside and contemplating the fact that after all they have for a great-great grandfather a jittering monkey.

Socialism

The most widespread of our present-day tendencies is Socialism or " Marxism," as it is sometimes called. It is a modern theory of society, and in its full and most logical form is called Communism. The only serious opponent of Socialism is the Catholic Church, and the arguments that socialists use against the Church are either puerile or vicious. These two societies cannot co-exist and if socialism were to win the struggle society would be doomed. The state would violate the sanctity of the family life, and would perhaps even go so far as to provide a kind policeman to put us to bed at night, or tell us what to eat, etc. Our life would not be our own, and this is only too evident from the present-day demonstrations of this tendency. They cannot understand why the Church does not submit to their modern plans of State control; why she does not admit one exception to the institution of marriage. Socialism would rob man of his property, without which there is no sense of self sufficiency or no desire to work. The things which society suffers to-day are not due to things which man is not responsible for; they are direct results of this false philosophy and a vicious training of the mind. The monstrous inequalities into which industrial society has allowed itself to drift have arisen through small agencies, all of which have their root in that same false philosophy of life which is now attempting to remedy its own errors by a remedy still reposing in the same false philosophy: the remedy of Socialism.

This philosophy has led men to want to enjoy rather than to

own, and then the capitalist reached the head of affairs, until now more and more the mere gambler or swindler enjoys supreme economic power in our diseased economic society. It has done away with the moral principle of private ownership and ushered in servitude in every form. We have but to glance at the current topics of the day, to see the havoc wrought by Socialistic (Communistic) tendencies. The "Socialistic Drama" of Russia is only too sad a reality, and has spread the worst forms of terror, by its disgusting excesses. The depths to which morals have fallen in that unfortunate country as a result of these policies is unfathomable and even in our own country there is not a mere shadow but a dread reality of the same Socialistic spirit. The one barrier to the spread of this desolation over Christendom from its center in Russia, has been the Catholic Church, to which society owes an inestimable debt of gratitude.

Evils of Socialism

All the systems which have been briefly mentioned, as well as others, too numerous to mention, are principles of modern philosophy which may be conveniently placed under the heading of "Principles of Modern Infidelity." Infidels are to be met with in every century of the Christian era; but such an array as we have had before us during the last two centuries was never witnessed since the day when Christianity first took possession of Europe. Due to these principles, Infidelity has become a power in society. It is a singular phenomenon in the annals of the Christian world, and it must be said that Protestantism, was one chief cause of this fact. We may be thankful that Catholicism has been left that great heritage of Christian (Scholastic) philosophy with which to ward off the ravages of so-called modern Philosophy.

As to philosophy, which is the highest manifestation of reason, we must admit that among infidels of the eighteenth century it was practically null. Men looked upon infidelity as the natural and necessary result of the legitimate progress of reason but they failed to remember that the thirteenth and seventeenth centuries, as represented by their greatest men, were thoroughly Christian; the eighteenth, on the contrary, was infidel. Earnest and learned men cannot and do not hesitate to say that these earlier centuries were undoubtedly far superior to the eighteenth. What philosopher would consent to speak seriously of the pretended philosophy of Voltaire and Rousseau. They were writers of genius but strang-

Sad Fate of Infidel Philosophy

ers to philosophy. Conscientious men who lived in the midst of the infidelity of these philosophies, and read their principles, have not been afraid to affirm that they had no other source than licentiousness and unbridled sway of the passions. The fulfillment of these desires could not be accomplished until external authority was cast aside, and hence they withdrew from the Church. Without the Church as a guide these philosophies have had but one major teaching and tendency—demoralization—which carries with it every manner of crime hurtful to society. Without the guidance of that same Church, there is no hope of society ever recovering from the injuries she has suffered. Man may think that the boasted achievements of the nineteenth century will save him from ruin, but this " over-confidence " will only more speedily usher in calamity. Modern society would do well to imbibe the principles of the early Christian (Scholastic) philosophy and appreciate the wisdom of Cardinal Newman's dictum: " If we can see farther than the ancients, it is because we stand on their shoulders."

DISCUSSION

FR. SEBASTIAN ERBACHER, O.F.M.:—There are two American systems of thought which have a wide-spread influence on practical life and must needs be offset by Christian philosophy. The one is the behaviorism of John B. Watson, who holds such views as, " thought is subvocal speech "; ethics is " based entirely upon behavioristic methods "; philosophy is " gradually disappearing and becoming the history of science "; religion is " being replaced among the educated by experimental ethics." In saturated or diluted form of various degrees this philosophy has been poured into the textbooks of psychology. It colors modern literature and it is the stock-in-trade of the popularizer of science. Behaviorism is concerned with the prediction and the control of human behavior, which is said to be at the mercy of inheritance and environment. As a philosophy, it is deterministic. It makes physiological conditions of the human organism the complete cause of human acts, takes no account of liberty of will, destroys the notion of responsibility, moral obligation, merit, sin, reward and punishment in the Christian sense. The manner in which a scientific method of approach has become a philosophy in the theory and practice of those metaphysically disinclined, would be amusing if it were not so tragic.

Behaviorism of John B. Watson

The other is the philosophy of John Dewey, who more than any other one man has influenced the spirit and the practice of the modern American school. His philosophy is pragmatic. Activity is basic in his system of thought. Practical life is the test of theory. Success or failure of our actions, not reason and intelligence, let alone revelation, is the criterion of truth. Dewey stresses the experimental method, the scientific attitude. According to him the experimental conception of life is the only philosophy suited to the needs of American democracy; we must judge

Pragmatic Philosophy of John Dewey

things according to their practical consequences in meeting the needs of life.

Dewey believes that social conditions have a dominant influence on philosophy; he identifies moral and social values. This philosophy he applies to education. Science, industry, and democracy are the bases of his educational reform. Education must be socialized in all its aspects, subjects, curriculum, methods, aims procedures, etc. He is the protagonist of the "self-activity school" in opposition to what he calls the passive school of the past. Work is the social basis of living. There is no room for religious belief in this system.

Task of Neo-Scholasticism

Scholastic philosophy has no small task before it in offsetting these two systems of thought. This is a very practical problem today when so many of our own teachers and students come under the influence of Watson and Dewey in literature, textbooks, lectures, summer sessions, and university courses.

FR. SEBASTIAN ERBACHER, O.F.M.:—Philosophy alone will never solve the problems of life. The history of philosophy proves the helplessness of man's unaided reason in face of the moral difficulties of life, individual and social. Scholastic philosophy is essentially Christian; it can never rid itself of the viewpoint of faith in its speculations and their practical applications. The great modern sin, which Scholastic philosophy must combat, is the divorce of reason from faith, of science from religion. The same God of all truth is the source of revelation and of nature.

Insufficiency of Philosophy

It is sometimes said that the Christian faith has failed to change the world; that Scholastic philosophy even in the days of its glory has made no lasting impression upon the morals of men; that the gradual abolition of slavery, the raised status of women, and the betterment of the condition of laborers, are by no means due to the influence of Christianity. Why expect of the Church or of her philosophy what her divine founder did not intend to accomplish? God has given man a free will which He respects above all things. Mere knowledge is not virtue. Despite the most perfect information and the ever ready grace of God, including His fundamental gift of faith, man is free to co-operate with the Lord or to refuse to do so. Therefore, we must always make a distinction between a nominal and a real Catholic. Theology makes a very clear distinction between faith which is living and faith which is dead. If Catholic countries have swung over into the camp of the enemies of the Church; if a large body of Catholics the world over are unfaithful to the laws of God and of the Church: we cannot blame the Church, nor the Catholic faith, nor Scholastic philosophy, but the free will of man. The Catholic faith and Scholastic philosophy are as powerful as ever to reform society and to produce saints, as history amply testifies, provided what they teach is not only known, but accepted and made the principle of conduct. Regarding slavery, woman, the condition of the workingman, we need but contrast what history tells us regarding these points before and after Christ. Pope Pius XI recalls to our minds what the Church has done for education, for the arts and sciences, in his ecyclical on *Christian Education.* He reminds us of what the Church has accomplished theoretically and practically for the good of the laborer and in the interests of social reform in his encyclical on the *Social Reconstruction of Society.* The modern world, despite its materialism and atheism, is much better than its philosophy, because it is still drawing upon a powerful Christian inheritance which it has not succeeded in laying aside completely.

Weakness of the Human Will

An argument against the influence of Christianity is sometimes sought in the scandalous lives of some of the crusaders. In the first place we cannot logically attribute the conduct of a minority, be it ever so large, to the entire movement itself. Jesus even permitted a Judas in the society of the apostles. Secondly, the very word "crusade" to this day has been associated with a high ideal of service for the good of others. The crusades were a Christian world's expression of a lofty ideal. They found their greatest source of encouragement, strength, and unity in the papacy. From Urban II to Clement V the popes considered the liberation of the Holy Places the cause of God and spared neither efforts nor sacrifices to do what God willed. The threefold aim of the crusades was: (a) The regaining of the Holy Land from the power of the Moslems; (b) the defense of the Western world against the encroaching Moslems who were threatening to overrun Europe; (c) reunion of the Oriental and Western Church. The driving forces of the movement were: (a) The influence of ecclesiastical authority, of popes and councils; (b) enthusiasm for the honor of God and the Christian name, for the prestige of the Church; (c) zeal of the crusaders for the salvation of their own souls.

Argument against the Crusades

Although the immediate objective of the crusades failed, or was only partially and temporarily obtained, history records a mediate success. Europe was prevented from becoming Mohammedan; the economic, social, and political good of Europe was furthered; the power of the papacy was strengthened; the conflict regarding investitures was concluded in favor of the Church; the decline of feudalism was hastened; the national spirit was developed; foreign commerce was encouraged; the growth of cities in Italy and Western Europe was favored; the rebirth of philosophy, literature, and art was aided; and the strongest impulse was given to establish foreign missions in Persia, India, China, Tibet, and other parts of Asia. No cause is so good in itself that it cannot be marred by human imperfections. Instead of becoming disconcerted by the presence of these frailties of man, we should rather be goaded on to greater individual and social Catholic action and help our Catholic faith and Christian philosophy to become the vital forces in modern society which they have ever been in the past.

Benefits of the Crusades

FR. ADALBERT CALLAHAN, O.F.M.:—Epistemological controversy, born of the Subjectivism of Immanuel Kant, has, during the last century, occupied an important place in philosophy. Here is the ultimate source of the indifferentism, the agnosticism, and some of the atheism so prevalent nowadays. The great German thinker doubtlessly had little of this in mind, nevertheless it has been the result. His philosophy necessarily encloses man within his own mind and so he becomes individualistic. These tendencies lead man to exalt his own rights above those of others, and when there is added a dash of Nietzschism, a grand debacle like the World War is the consequence. From nothing so much as from the late war has come the present state of morals and the social upheaval everywhere confronting us. It would be useless to list the many social trends, everyone knows them intimately, but in general we should remark that they involve, if logically carried out, a destruction of the foundations of human society.

Influence of Kant

Pragmatism, the philosophy of utilitarianism, has found its way into the modern scheme. It is simply a method of getting around the objective moral

law, and any such system can gain a following. This one is well presented, and has a few rather important names behind it; therefore, it has done very well. Illogical it certainly is, but who wants logic if he has a means of avoiding his great obligations? It is easy to see how such a system is behind the piratical methods of modern big business, how it hardens the conscience to the exclusion of consideration for the rights of those less able to grab for themselves.

Evil of Utilitarianism

It would be wrong to say that nothing good has resulted from modern philosophic thinking. There is the revival of Scholastic philosophy, with its new presentation of the world-old truths. To all Catholics, and to some non-Catholics, this system has offered the only rock-ribbed shelter in a storm-swept region. It is necessary as a justification of the faith that is in us and as a defense against the forces hurled against all we prize—home, freedom, honor, private property, the right to work and all the rest of it.

The average person is thinking more deeply than ever. This is why it is so important that he be taught to think rightly. The means of learning are at his hand, but as has been shown, these means are largely dominated by those professing false and misleading philosophies. It might not be so bad if these philosophies had made men more happy, more human, as they claim for their intention. The fact is that people are often more miserable than if they knew nothing about any of these tenets. It is only the truth that makes man free, it is only right that gives true might. Hitler and his merrymen, the priest-haters of Mexico, the blasphemers in Russia, and all like them will find it out some day. But they are the result of carefully nurtured ideas and cannot be done away with till the ideas themselves are dead. And the ideas will most likely commit suicide—they usually do.

The trouble with the modern type of thinking and the modern action born of it is that it has lost its soul. Mechanistic philosophy, and behavioristic philosophy, have stripped it bare with the result that the body is catered to simply because it is all one has. When the spiritual is gone it is simply gone and the material must go alone. Where it will go is another question. It seems to have gone into the proverbial gutter, and not until it wins back its soul can it arise. We hold that disgust with the gutter will lead a sufficiently great number of individuals to come seeking their souls again. This will be a great day for true philosophy and those who know something about a moral law. Let it come as soon as it will, and let philosophy, after her latest fitful fever, sleep well.

Philosophy without Soul

FR. FELICIAN BERKERY, O.F.M.:—Modern philosophy in its association with social life has had a devastating influence. It has fostered a pronounced idealism, favoring intellectual subjectivism. It is making inroads in all directions of social life. It has cultivated a religious disorder in men's minds that is repressing. It has favored a moral laxity and has destroyed the principles upon which right authority should be founded. It has actually reduced the intellectual world to the tragic point where cultivated minds are beginning to guide themselves by their own fancies. Individualism has resulted as a necessary evil. These ills of modern social life are the result of the improper medicinal treatment of modern philosophy and will eventually lead future generations into disaster unless the strong hand of scholasticism intervenes—which it eventually will.

Devastating Influence of Modern Philosophy

Rationalism does argue the fact that there have been inconsistencies in the teachings of scholasticism—apparently there have been to the antagonistic system. We do admit that there did come controversies to split the solid granite rock of Thomism, the most rigorous of the philosophies; divergent tendencies were manifested. There was the doctrinal rigidity of Dominicanism, and the flexible practicality of Jesuitism, but at the same time a scrupulous respect for human liberty. Stormy disputes did arise, such as that on efficacious grace, which disturbed the whole of the seventeenth century, and set Banez and Molina, and all the great universities of Spain at grips; however, unity was not compromised, and any innovator who found himself unable to accommodate himself to certain and well-defined framework was cast out.

Division in the Scholastic Camp

Scholasticism with its sound and basic principles, is the only possible cure for the philosophical gangrene that threatens the body of social life. Its foundation is secure; it is most humane in its dealing with social life and is freest from all that intellectual anarchy which has possession of the present social life of the world.

OBJECTIVE ETHICS AND THE NORM OF MORALITY

Fr. Raphael Vonder Haar, O.F.M.

The "new morality," or more correctly, the new system of ethics, is making a determined assault on the ethical teaching of the past. Not even the Ten Commandments have escaped the attack. Until recently the Decalogue was universally accepted, if not as the law of God, at least as an expression of the fundamentals of common-sense morals, but nowadays even this is challenged. The charge is this: Traditional ethics is obsolete: it has outlived its usefulness. What we need is a code of morals that is more in harmony with modern conditions, one that springs naturally out of our social and economic life. A man-made, not heaven-born morality is required.

The New Morality, Subjectivism, Arbitrariness, Uncertainty

As we might expect, Bernard Shaw is one of the iconoclasts, smashing our ideals and tearing down our standards. In *Quintessence of Ibsenism* he says: "The realist at last loses patience with ideals altogether, and sees in them something to blind us, something to numb us, something to murder self in us. Every step of progress means a duty repudiated and a Scripture torn up."

Bernard Shaw

Another very popular but equally erratic writer who proposes that the old moral law be thrown on the scrap heap of worn out systems is H. G. Wells. In magazines and newspapers he has remarked time and again that the reason for the wide difference between the behavior of to-day and a half century ago, is that nowadays people have no accepted standards. According to Wells men hold that "there is no value in faith and no virtue in chastity." He asserts that the moral law has collapsed because the imperatives that once sustained it have been repudiated.

H. G. Wells

As a sort of climax of ethical aberrations one might just refer to an article that is typical of many appearing in current magazines

of wide circulation. In the Atlantic Monthly (Vol. 113, p. 174), we find a certain Mr. Clutton-Brock expressing himself in this fashion: "There are no ethics worth a thought; there cannot be. At the best any generalization is but an average, therefore not quite true even in one instance, and it will have as many exceptions as inclusions. . . . You cannot standardize humanity. It changes, it evolves and what was true yesterday is not true to-day; what is true for you is not true for me." Inconsistently enough, the writer of this article wrote several books defending generalizations in ethics and evidently wrote to convert readers to them.

Magazines

So right and wrong are just matters of personal opinion, and ethics—if it exists at all—is purely arbitrary, *entirely subjective.*

We have been deluged with literature of this kind and books expounding the new morality have become epidemic. Never was it easier to become a popular writer. The most effective means is to make a bold attack on the sacred beliefs of the past, particularly the moral law. Of course, it would be absurd to quote Shaw, Wells and similar writers as philosophers or moralists—they are mentioned merely as exponents of popular notions of morality.

A radical opinion which has developed from moral positivism and which is becoming more and more acceptable, tells us that our moral principles are the outgrowth of custom and that nothing is really *right* or *wrong* but acts are only *according* or *contrary* to common practice. The theory likewise maintains that there is no possible way to prove that one set of customs is better than another, hence we can only describe what *is* but cannot determine what *ought to be.* Views, such as these, are advanced by educators of some renown such as the late professor William Graham Sumner of Yale. And whither do they lead?

Another View

Walter Lippmann tells us in his *Preface to Morals*: "Of all the bewilderments of the present age, none is greater than that of the conscientious and candid moralist himself. . . . When customs are as unsettled as they are in the modern world . . . it is presumptuous to issue moral commandments, for in fact nobody has authority to command. It is useless to command when no one has the disposition to obey. It is futile when nobody really knows exactly what to command." (*Preface to Morals,* p. 317).

Lippmann

But Lippman is himself a neo-moralist. He believes that ecclesiastical leaders, including the Pope, have failed to understand the trend of the times when insisting on the old moral principles, that scepticism of mind and freedom of action which modern men exercise are due to inexorable historic causes. "And that there is a kind of tacit agreement to let the moralist be moral and then to find other language to define the difference between good and bad, right and wrong." (p. 315 ff.).

Even pure hedonism is attempting to rise rejuvenated from the ashes of long buried systems. In his *New Morality* Durant Drake declares apodictically: "The only thing that matters, ultimately, is the kind of feelings sentient creatures have . . . morality actually serves to foster human happiness, or lessen human suffering, and this is, ultimately, its only *raison d' etre*" (p. 24). He adds this is the view being "diffused among the educated classes."

Hedonism

The cry for greater freedom is raised principally in the interest of more liberty in sex relations. The new morality is really new sex-morality or rather sex immorality. Judge Ben Lindsey and others like him do not advocate intemperance or dishonesty; they are opposed to murder except in the case of the unborn and socially unfit. In substance their recommendations are these: Lower the standard. Be lenient with irregular sex relations. Abolish Christian mariage and introduce companionate marriage. Spread scientific knowledge of birth control. Make divorce easy. Love will take care of itself.

Not only are the moral practices of the past being abandoned but the very foundations are being undermined. Basic principles are discarded, precepts of the natural law are declared repealed. One barrier after another is swept away. The most liberal concessions are made to the weakness of human nature. All this is proposed, as the champions of the new theories assert, in the interest of the human race, even in the interest of morality itself. In this way the new teaching is gradually poisoning the mind against traditional morality. Consequently, everything is being questioned and modern man is seriously asking whether there is any criterion by which he can measure the worth of his deeds; whether ultimately it makes any difference what he does; whether morality is not after all only a fabrication of the imagination.

Effects

It is imperative that this movement be combated before its destructive influence spreads farther, otherwise practically nothing will remain except wreckage. Morality is one of the constituents of human existence. Without it individual and social life are jeopardized; it is the dam that stems the devasting flood of uncontrolled passion. Certain physical wrecks, pining away in our hospitals are the most eloquent teachers of the havoc caused by a disregard of the moral law. Shakespeare's words: "The gods are just and of our pleasant vices make instruments to scourge us" (Lear, V, 3, 172), are just as true of nations as of individuals. When a society becomes honeycombed with germs of immorality, its dissolution is not far distant. Hardship, opposition, even persecution have been met and conquered by nations, but none has long survived widespread immorality. Moral corruption ennervated the great monarchies of Assyria, Egypt, Greece and Rome and finally destroyed them.

Need of Morality

The Rev. Charles Bruehl makes this excellent observation: "It is in the name of human happiness that the moderns make their plea in behalf of a revision of the existing moral code. Theirs is an extremely short-sighted vision. Human happiness is not to be found in that direction. Hard and stern as the moral law may seem it is yet the best guarantee of human happiness. More unhappiness is brought on humanity by a disregard of the moral imperatives than by any other agency. Morality in reality is the high wall that protects the human race against an inundation by all conceivable ills and afflictions. By tearing down morality we open up the floodgates of misery. This can be seen in the life of the individual. A cynical disregard for the moral law has never helped anyone to the fuller and richer life, nor has it brought to anyone an overflowing measure of happiness. It makes always for degeneracy and unhappiness." (*Central-Blatt and Social Justice,* May, 1929, p. 40).

The cause of these vagaries is loss of faith and the subsequent departure from the sound ethical teachings of Christian philosophy. Having abandoned the Christian concept of life men are floundering about in a bog of uncertainty and error. A subjective, arbitrary morality has been substituted in the place of the objective norms of the past. And subjectivism in morals just as subjectivism in faith leads to chaos and ruin.

The Cause

An ethical system of philosophy is designated as subjective or objective according to the nature of its fundamental principles. The principle is subjective, if it makes moral judgments depend entirely upon a moral faculty, the intellect, will, or moral sense—if it admits of no norm besides the faculty. Actions then are good or bad only because an inner voice approves or disapproves. Intuitionism and Kantianism belong to this class. Although subjective, these theories furnish us with a guide of conduct, admit conscience, and attempt to defend and promote morality.

Philosophers Divided

Practically every other important system is based on an objective principle. In all of them, moral judgments are determined by some norm distinct from the moral faculty. In this group we have all forms of utilitarianism, as hedonism and altruism, also the Leibnitz-Wolf school having personal perfection as its ultimate end, finally stoicism and scholasticism, both proposing rational nature as the norm. (Cfr. Cathrein, *Moral Philosophie,* Leipzig, 1924, Vol. I, p. 189 ff.).

At the Sixth International Congress of Philosophy held at Harvard in 1926 the objective basis of our moral judgments was discussed. Besides Dr. John A. Ryan, who naturally defended the objective value of our moral concepts, Levy-Bruehl of the Sorbonne maintained that there is an objective foundation of moral judgments but that the philosophers will naturally differ in deciding what that foundation is. (Report of Sixth International Congress of Philosophy, p. 397). Adams of California University said: "The objective Good is neither a shadowy detached form of reality, which leaves everything existing in nature and mind at the mercy of sheer mechanical determination; nor is it but the verbal cloak which we throw over mere factual or brute energies. Thus I say that the only basis of objective judgments in ethics as in all value judgments, whether theoretical or practical, lies in the nature of the real world, as that world is disclosed by experience." (Report, p. 422). On the other hand, Ross of Oxford thought that the only predications of good that are inferential, are those which are not predicating goodness-in-itself (*bonum honestum*) but goodness-as-a-means (*bonum utile*)." In other words, we know the bonum honestum only by intuition. (Report 408). Calkins of Wellesley distinguished between individual and social ethics and believed

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the latter to be objective, but the former to be purely arbitrary and subjective. (Report, p. 416).

From what has been said about subjective and objective systems of ethics it is plain that *we demonstrate the objective nature of ethics* if we can prove that we have a *norm distinct from our moral faculties,* especially if we point out *what* that norm is. Before proceeding in our discussion it is essential that we define our terms and explain what we mean by norm of morality, and by "the Good" and morally good acts, and finally determine the basis on which objective standards in ethics are built.

The Norm

The norm of morality is *the determining factor* of the morality of human acts, that is, conformity to it *constitutes* the essential goodness of actions. Besides this, it is the standard which enables us to *know* whether our acts are morally good or bad. Any criterion which fails to fulfill these two requirements cannot be *the* norm of morality.

Its Properties

Little consideration is necessary to convince us that our norm must be *constant and universal.* Philosophic inquiry into the nature and value of human acts loses its significance if moral good and evil depend on variations of time and place. If the norm is not fixed but continually shifting, the discussion of our subject becomes just a solemn farce. Moral positivism with its many adherents fails in this respect since it teaches that there is no natural or necessary difference between good and evil, since all depends on customs and positive enactments which are everlastingly subject to change. Furthermore, the norm must be certain, because if it were misleading it would be useless for practical purposes. Lastly, it is necessarily the *highest* norm since the moral order is supreme and moral values are unquestionably superior to all others.

The Metaphysical Basis of Ethics—"The Good" and Good Actions

In its last analysis a thing is good if it has all that its nature demands, or in plainer English, if it is all it is supposed to be. Similarly those properties and activities of any being are good which are suitable or appropriate to its nature. "*Quod autem conveniens est alicui, est ei bonum.*" (Contra Gentes III, 3). Aristotle also held that good consists in conformity to nature. (Ethic. Nic., 1, c. 6, 1097 b, 25 ff.). Applying this to human acts, we con-

clude that fundamentally those are good which are according to human nature.

The Psychological Basis

To be moral an act must be deliberate. Freedom of action and advertence to the purpose are the psychological requisites of morally good actions. However, for morality in the strict sense of the term, there must be some advertence also to the norm of rectitude. (Cfr. *Antonianum* Vol. II, p. 470). Consequently, an action is *morally* good if one deliberately acts in a manner conform to human nature, i. e., if one acts freely and at the same time is aware that his deed is in accordance with his rational nature.

The Teleological Basis

Ethics is a teleological science. The most recent ethicians are in agreement with Aristotle and the scholastics in this view, although they differ in their opinions regarding the nature of the final end. Without doubt the end or purpose of human existence is one of the determinants of the moral value of our actions. We rightly designate a thing as good if it fulfills its purpose, e. g., a watch if it keeps correct time. However, this is a *consequence* of intrinsic goodness. If a being has all its natural requisites it will necessarily serve its purpose. In the same way, morally good acts are such as lead us, with the aid of reason, to our ultimate end, although conformity to the end is not the fundamental reason of moral goodness.

It is beyond the scope of this paper to do more than simply mention the philosophical basis of the subject under discussion. A more thorough treatment, especially of the final end of man, must be left for another occasion.

Norm and End

The relation as well as distinction between end and norm is well given by Dr. John A. Ryan:

> The true basis of ethical judgments is ascertained through an inquiry into the end or norm of conduct. The words "end or norm" denote a twofold manner of conceiving the fundamental ethical determinant. It may be stated as the end to which acts should be directed, or as the standard with which they should conform. In any particular ethical system, the two conceptions will lead to the same specific judgments. They merely present different relations of the same action. The one denotes conduciveness; the other, conformity. An act which conduces to the end will necessarily agree with the norm. (*Report*, p. 393).

Although our acts are morally good when they lead us to our end or destiny, yet we need a norm distinct from end to point out the

way, to inform us whether our acts are conducive to the end. Knowing that God is our supreme Good we perceive at once that blasphemy is wrong, on the other hand, it gives us no information regarding the morality of acts directed against our neighbor or ourselves. Our norm is the sign indicating the way to our destiny, it is the link between act and final end.

From our first definition of the morally good act—one that is *conform to human nature* and is performed freely and with advertence to this conformity or rectitude—it follows that human nature is the ultimately determining factor of moral good and evil. Furthermore, as will be explained presently, comparing our actions in their relation to rational nature, observing whether or not they are conform, we can judge of their moral value. In a word, human nature answers the two essential requirements of the true norm of morality. We come to the same conclusion if we define the morally good act as one directed by reason to our ultimate end.

Human or Rational Nature Our Norm

We should have no difficulty in admitting that man tends to his ultimate natural end whenever he acts in conformity to his rational nature. Nature is our reliable guide. Cicero's, *natura duce numquam fallimur,* is expressed by Meyer (*Institutiones Juris Naturae*) in this wise: "Directed by nature, every being attains its true good (end) and its perfection unless for some reason it is deflected from its course (Axiom 25, par. 33). For the Nature of any and every being is adapted by the all-wise Creator to the attainment of its natural end and this also constitutes its perfection. (Therefore) the nature of every being is the proximate rule (norm) of the rectitude of everyone of its natural activities" (Axiom 24, par. 32).

Human nature serves as a norm only if it is considered *adequately.* In one sense even the most injurious and shameful acts of man are in conformity with his nature. Every human act answers some natural desire and is the expression of some natural tendency. This, however, is true only if we consider nature in the physical sense. From this viewpoint, our nature is no norm for it would justify every act.

Human Nature Considered Adequately

It is otherwise if we view man in his entirety, that is, his whole makeup or *constitution.* This is what we mean by an adequate

consideration of human nature. There is a certain hierarchy of faculties with the intellectual faculties supreme, the senses next and vegetative powers last in order. At times the exercise of one faculty interferes with the operation of another. Naturally, the lower must yield to the higher else the action is detrimental to man's real interests, opposed to reason and wrong. Many, actions, while responding to certain inclinations, are opposed to the nobler aspirations of the soul. Thus drunkenness, although satisfying a lower craving by depriving man temporarily of the use of reason, is a violation of his rational nature and therefore universally condemned.

Man's Constitution

Furthermore, an adequate consideration of our nature requires that we take into account the *essential relations* of man. Man has relations and consequently duties to God, the Supreme Being, to his equals, and to lower beings. The first obliges him to acts of religion. The primary purpose of religion is not the personal perfection of man himself but the glory of his Creator. In the exercise of genuine religion man tends directly to his Supreme end. The relations toward his fellowmen tell us the moral value of charity, justice, etc., as well as the evil of murder, rape and robbery. In our use of inferior creatures, animals and plants, etc., man must be directed by his reason to use them for his true welfare, the well-being of his rational nature; this will eliminate every abuse or wrongdoing.

Essential Relations

To this first norm, rational nature, we may add others which, however, are not distinct from the first, but more specific applications that determine the value of our acts in particular cases.

Secondary Criteria

The natural or unnatural use of a faculty renders an act morally praiseworthy or deserving of blame. Natural uses are such as seek to realize the natural purpose of our faculties. Misuse does not mean injury of a faculty but its perverse use. Lying is reprehensible because it is the misuse of the faculty of speech. Speech is to express our ideas. The assertion that its purpose is to hide our convictions, at least in diplomatic relations, is surely false. In as far as lying is an abuse of a natural faculty it is intrinsically wrong, and so in every other case. This rule not to use a faculty in such a way as to

Use of Faculty

oppose the attainment of natural purposes, admits of no exception. There is no more direct violation of nature than this and the moral wrong is evident as soon as misuse becomes apparent.

This criterion is called by Michael Cronin (*Ethics* I, p. 140) the principle of "general utility with general observance" and its opposite, "general injury with general observance." According to this *dictum,* those acts are morally good when as a general rule they are conducive to the well-being of the human race; those are evil which usually prove to be injurious. Occasionally, even the best actions and intentions work havoc; and unnatural deeds, as lying, apparently bring advantages but it is impossible that this should be the rule. An act that always works ill must be contrary to man's nature and his natural purpose. Injury is a surer criterion than utility. A little arsenic will kill a man when all the medicine in the drug store is unable to increase his health. Applying this rule, we condemn unjust business practices which bring great advantage to a few individuals at the expense of the buyers and competitors. Again, we can see the immorality of promiscuous sex relations from the spread of disease resulting from the practice. These acts stand condemned in themselves independently of the consequences: but the evil results are criteria of the intrinsic immorality of the actions.

General Utility and General Injury

Thus, rational nature adequately conceived is the best norm or criterion to judge the morality of our acts. It is a constant norm that finds universal application. As might be expected, it has its limitations; it cannot give us certainty in all cases. The greatest moralists admitting and applying the norm have differed in their conclusions. Yet this defect is common to all science; consider only the disagreement and uncertainty in biology, chemistry and sociology.

Limitations of Our Norm

Some of the world's greatest thinkers have accepted this norm of morality. Aristotle, whom Trendelenburg called the "ethician of the ages" proposed the doctrine. In substance he taught this: moral good is that which is adapted to and desired by human nature with all its characteristics, so that human nature itself, in as far as it is rational, is the approximate rule of moral goodness. If we consider the activities of any being, good consists in conformity to nature. (*Ethic. Nic.,* 1, c. 6, 1097 b, 25 ff. and 2 c. 6, 1106 b, 36).

Aristotle

"Communis intellegentia notas nobis res efficit easque in animis nostris inchoavit, ut honesta in virtute ponantur, in vitiis turpia. Haec autem in opinione existimare, non in natura posita, dementis est. Nam nec arboris nec equi virtus, quae dicitur (in quo abutimur nomine), in opinione sita est, sed in natura. Quodsi ita est, honesta quoque et turpia natura diiudicanda sunt."

Cicero—De Leg. 1, 16:

The Summa of St. Thomas reveals that he adopted Aristotle's doctrine and developed it. In the works of Aristotle, St. Thomas and of the other scholastics we find no express treatment of the norm of morality. But in their discussions on the nature of "the good" we can discover what they considered the standard or norm. In *Contra Gentes* III, we read: "Quodlibet agens tendit in aliquod determinatum. Id autem ad quod agens determinate tendit, oportet esse conveniens ei; non enim tenderet in ipsum nisi propter aliquam convenientiam ad ipsum. Quod autem conveniens est alicui, est ei bonum."

St. Thomas

Liberatore taught that morality depended on the *objective order of things* as apprehended by reason. Donat speaks of the *ordo rerum in finem ultimum.* (Ethica I, p. 71). As one can readily see, this is not the same as ultimate end but the order that leads to the end. This order is thus explained by St. Thomas: "Throughout the universe every creature is for its own act and perfection. Secondly, however, the lower beings are for the higher. All creatures are for the perfection of the entire universe. Finally the whole universe in all its parts is referred to God as its end, in as far as divine goodness is mirrored in it unto the glory of God." (1 q, 65 a. 2.).

Cosmic Order as a Norm

Professor Whitehead emphasizes the need of *world-loyalty* signifying obedience to the order of nature. The world and all things in it have their function. They are to be ennobled in man and by man through a rational use of them. In general by a proper employment of the world round about him but above all by dedicating his surroundings and his activities to the high purposes of personal perfection, the welfare of others, progress and civilization, science and culture, and most of all religion, man gives evidence of world loyalty, his deeds are noble and praiseworthy because of their conformity to the order of nature.

Following Thomas Aquinas and the scholastics in their concept of the universe we might add that as the lower things are for the higher, so all things are for man; furthermore, as all things are for man, so man is for God. Man is king in the visible creation, but God is King of man. The best world-loyalty is loyalty to the Lord of the world. By using the works of creation according to the purpose for which they have been made, man is obeying the will of the Creator and officiating as a highpriest unto God in the temple of the universe.

Certainly, the theory has much to commend it; it proposes a norm of the most exalted kind. Still the cosmic order, *ordo rerum,* as it affects morality, must be taken in a very restricted sense, i. e., as it applies to man. It is obvious that phenomena, which are independent of man, have no bearing on morality. Then too we can know the *ordo rerum* as it concerns us and especially as it determines the morality of our actions only by examining human nature in its various relations. Hence we must fall back on our rational nature as a criterion to tell us which acts of ours are according to the *ordo rerum,* just as we must consult our nature to decide which are conducive to our end.

Criticism

A comparison of the two theories shows that the one considers the cosmic order in as far as it refers to man, the other considers man in his relation to the order of things about him. Human nature is the *proximate,* the cosmic order a more *remote* norm of morality.

However, it would be a grave error, while defending the objectivity of ethics and morality, to reject all subjectivity. The schoolmen distinguished between the two. Objective morality is that which is inherent in the act itself, or better, that which is derived from the object of the act (finis operis) and the circumstances surrounding it. Subjective morality, on the other hand, arises from the will or intention of the person performing the deed (finis operantis). The latter depends on the former; ordinarily the act is good subjectively if the object of the deed (finis operis) is good. Still this is not always the case, for a bad intention vitiates an otherwise morally good act, or again, due to an erroneous conscience one may be justified subjectively in doing what is wrong objectively, e. g., practising a false religion in which one sincerely believes. (Cfr.

Conclusion

Cathrein, *Moral Philosophie,* Vol. I, pp. 205 and 318; also Noldin I, p. 79).

But ethics, the science dealing with the principles of moral conduct (morality), is objective, not something purely subjective, arbitrary and uncertain. We have a reliable standard of right and wrong, hence there can be no justification for the modern attitude which says: "We have no way of knowing whether it is better to do this, or better to do that, or better, perhaps, to do nothing at all."

Note

Against such authors as Bouquillon, Balmes, Chr. Pesch, who conceive the ultimate end of our existence as the principal norm of morality, we have the following argument in Lehmen's *Lehrbuch der Philosophie,* Freiburg (Breisgau), 1919, Vol. IV, p. 61:

The end might be conceived as either eternal happiness or the glory of God. a) Eternal happiness is not the norm, for it is the reward for good deeds, hence presupposes them and their norm. Besides, it is no criterion, for how can we know if lying, stealing etc., promote or hinder the acquisition of eternal happiness unless we learn that they are forbidden by God's commandments? In this event, the will of God, not our final reward, would be the norm. b) In like manner, the glory of God is not the criterion, for it, too, takes for granted the difference between moral good and evil. An act is good primarily not because it promotes God's glory, but, vice versa, it contributes to His glory because it is good. Moreover, such a norm would give us no information in the case of actions not immediately conducive to this purpose. We could not know the morality of chastity, injustice, etc. by this means. Cfr. also Frins, *De Actibus Humanis,* Vol. II, p. 93.

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DISCUSSION

FR. GERARD SCHMALZ, O.F.M.:—In commenting on Fr. Raphael's paper I should like to stress that there might have been a more thorough and extensive sifting of the field outside that of scholastic philosophy. No doubt, there are many serious and *bona fide* thinkers deserving of a hearing. Then, in connection with objective morality and its norm I should like to see the following points brought out more distinctly and forcibly: The *objective need* of morality for *man*, hence the *necessity* of an objective norm, *easily knowable*, so that even the uncultured can know the more important and necessary precepts of morality; *certain; substantially unchangeable; natural*, i. e., holding for *all men*, not only Christians and Catholics; *obligatory* for all, i. e., not only embracing or touching all.

Regarding Father's reasoning, though somewhat meager, it is satisfactory for us who read the same books and who learn the same matter in practically the same manner; but, will it appeal to the man who knows or who cares to know nothing about God and the ultimate end of man?

The Argument *Ex Analogia*

It seems to me that the argument *ex analogia* could be used here with good results. For instance, man is only one reality in the vast universe; besides man there are realities almost infinite in number and different in nearly as many ways. Now, in all these many realities there is rule and order—a kind of morality, as it were, for each reality has its own path in which it moves with a constancy and uniformity which is as clearly visible as it is marvelous. Everything is *normed and follows the norm.* And this is *ab intrinseco, according to the makeup of the various beings.* Paths and norms are *fixed,* mostly certain or marching on to certainty with the progress of science. These beings have no choice, they cannot deviate from their path. Should man, then be the lone exception, especially since he has choice as to his behavior?

There are many sciences, e. g., physics, chemistry, biology, astronomy and to a certain extent, also mathematics, which I think could render good service in illustrating the *existence, necessity, knowability, unchangeability* and *natural character* of the moral order and its norm. I think this is apparent to any seriously thinking mind. Since the world today is imbued with science and the progress of science, arguments from the sciences will mean meeting our opponents on their own ground whence they in turn will be better able to see and understand our views.

Arguments from the Sciences

FR. RAPHAEL VONDER HAAR, O.F.M.:—The remarks of Fr. Gerard are

valuable for a more extensive treatment of this subject, but the limited time alloted for the reading of this paper made it impossible to develop the subject further. Serious and representative thinkers have not been entirely omitted. Aside from the modern schools of philosophy, mention is made of Levy Bruehl of the Sorbonne, Ross of Oxford, Adams of California, Professor Whitehead and Walter Lippmann.

Rejoinder to the Above

Regarding the scholastic arguments, I think they are valid also for those not of our school. I believe that sincere men, whether Christian, Jew or Gentile, whether or not they agree with us as to the ultimate purpose of life, can find in rational nature a norm of conduct. In proof of this we have Aristotle, Cicero, Confucius and the Stoics. (Cfr. Cathrein, Vol. I, p. 192 ff.)

In a discussion of this kind it is necessary to take into account the Theistic concept of nature. In the paper it is only referred to occasionally and does not constitute the main argument. Really the principal proof *is* "ex analogia:" human nature is the norm of human conduct just as the nature of any and every being is the norm of its activity—this is based on the authority of some of the greatest names in ancient and modern philosophy. The Theistic idea is employed as an argument only in the Note against scholastic writers, who believe in the existence of God and the future life.

FR. ANACLETE SUTHERLAND, O.F.M.:—The topic on which Fr. Raphael wrote is most important, for upon the observance of the right norm of morality the wellbeing of the human society depends. But in order to produce the very best results, the truths of this paper should be couched in the language of the people and spread abroad. Might it not be true that we have too many philosophers and too few popular writers? Might we not learn a lesson from the false philosophers of Germany who, wishing to convert the masses to their views, were clever enough to clothe their tenets in the simplest and most striking language. The language of Scholasticism is technical and heavy with Latinisms so that no one but the educated may hope to grasp its meaning. If we want to use our philosophy to instruct and correct our people, we must preach and read to them just such fundamental truths as the Norm of Morality, but we must do so in terms that will be easily understood and appreciated. If our opponents present wrong in an attractive style, let us redouble our efforts to present truth even more attractively and appealingly.

Popularizing Scholastic Truth

FR. THOMAS PLASSMANN, O.F.M.:—Seeking after the Norm of Morality, might we not say tersely: "That is the Norm which has been accepted as such *semper, ubique et ab omnibus*"? What else is this but nature? We can see this truth illustrated in the pagan and in the child, who may never have heard of the Moral Law but who on violating it experience a natural disturbance of the inner self which shows itself outwardly. The child will blush at its first lie. Why? Because it has done something against nature and nature rebels. This seems to be a fair argument for it is observed *semper et ubique et ab omnibus*, and those who cry out against it have no other sure and definite solution to offer.

A Safe Criterion

FR. BONIFACE McCONVILLE, O.F.M.:—Speaking of the Norm of Morality, it strikes me that the important thing for us to do is to endeavor more

earnestly to convince the rank and file of men that we Catholics are by no means subjective in our code of morals. Almighty God has very definite and settled ideas regarding morality, an objective norm, a system independent of His opponents' thoughts. In the strict code of morality which we Catholics profess and endeavor to follow even against natural inclinations, we see nothing else than God's objective norm, His unchangeable standard for man's morality upon earth. No human being can have the right to oppose God's standard by setting up his own and following the line of least resistance. The world at large is so used to subjectivism in this matter that it will not easily yield to the correct view. Might it not be helpful to publish in plain popular style pamphlets proving the reasonableness of the Church's attitude respecting her code of morality?

Our Duty to Spread the Truth

SOME CAUSES RESPONSIBLE FOR THE PRESENT VITALISTIC TREND IN BIOLOGY

Fr. Matthew Baran, O.M.C., M.A., S.T.D.

The enigma of life must be classed with those philosophical problems, which, from the very beginning, have caused controversy among philosophers and which today await the correct solution.

Life, an Ancient Problem

The earliest history of human thought, records many varied attempts to explore it. The success of these early thinkers, however, has been but slightly improved upon even at our late day. Early Egyptian legends refer the origin of life to some god, attributing in curious circumstances self-regenerative powers to various lower forms of life, such as mice, snakes, flies, etc.[1] However, the Greeks alone advanced the first philosophical solutions of any importance. Their primitive explanations have in the very start assumed a twofold characteristic; with Anaximander and Anaxagoras they became Mechanistic, while Socrates, Plato and Aristotle defended the Vitalistic view. For twenty and more centuries these solutions have continually appeared on the horizon of philosophic thought, at times proposed subtly, but more frequently (especially the Mechanistic belief) submitted in an extremely crude manner. In this paper the last forty years of the Vitalistic and Mechanistic contention will be considered exclusively, with the object of discussing some causes responsible for the latest Vitalistic trend in biology.

Before beginning the discussion, however, it will prove advantageous to premise, that the terms Vitalism and Mechanism are throughout the paper to be understood in their broadest sense, i. e., under Mechanism are included those systems which explain life by means of chemico-physical or material energies exclusively; Vitalism, on the other hand, signifies all solutions in which life is to be a non-material force, no matter whether it is termed, " entelechy," " vital force," " soul," " élan vital," or any other name.

[1] Gardiner, Alan H., " Life and Death," *Encyclopedia of Religion and Ethics.* Edinburgh, 1916, VIII, pp. 19-25.

In the latter half of the nineteenth century, great hope was reposed in the possibility of explaining the functions and nature of life by means of the Mechanistic theory exclusively through its new medium; namely, evolution. This desire was strongly cherished by Haeckel and Buchner; to their dismay, however, it failed to realize their dreams.

Hans Driesch, who about the same time was working upon the problem of life, performed several experiments which were largely responsible for his abandoning the Mechanistic theory, in order to join the ranks of the Vitalists. These experiments were performed in embryology upon a developing frog's egg, in which he noticed that after a fertilized egg had been shaken apart, both halves developed normally into two complete individuals. This phenomenon led him to conclude, that some "force" must be present in the halves, which promotes their development in such a unique manner. This "force" which evidently exists in the elements or the cells of a newly developing organism, was named after its own nature, a "harmonious-equipotential system," and was primarily introduced into the field of biology, in order that the results obtained from the related experiment might be explained. The "harmonious-equipotential system," however, is not the ultimate constituent of life as it may seem, but it, in turn, is guided by an "entelechy," a non-mechanical entity.

The Origin of Driesch's "Entelechy"

> The harmonious system, then, is not a machine; it is, in fact, as it seemed to be from the beginning, a something that is governed by Individualising Causality. "Entelechy," as a non-mechanical agent of nature, is at work in the harmonious-equipotential system.[2]

The nature of this new agent is dscribed by Driesch as being,

> neither "an energy" nor "a material substance" of any special kind: such an assumption would lead to absurdities. Entelechy is an agent *sui generis*, non-material and non-spatial, but acting "into" space, so to speak; an agent, however, that belongs to nature in the purely logical sense in which we use this word.[3]

This "entelechy" is, according to Driesch's teachings, the life-principle of an organism capable of receiving it; moreover, it is similar to the soul of the scholastics, and its relations to the body

[2] Driesch, Hans, *The History and Evolution of Vitalism*, London, 1914, p. 210.
[3] *Ibid.*, p. 204.

are nearly the same. Giving this opinion further consideration, we are obliged to conclude, that the principle of life according to some of the latest biological beliefs, is not to be found in matter as matter, but in matter as influenced by an agent outside of it; though not supernatural, it is neither material, but merely natural, because it is primarily ordained to complement the body in a natural manner, in order that it might live.

Driesch, as we have seen, became an ardent defender of Vitalism, after his biological experiments could not be explained, except by the admission of a basic principle, which he termed " entelechy." William McDougall, a psychologist of considerable repute, had also joined the ranks of the Vitalists, though on account of somewhat different convictions. He says:

> My prolonged puzzling over the psycho-physical problem, has inclined me to believe that these attempts cannot be successfully carried through, and that we must accept without reserve Professor Taylor's dictum that Animism " embodies the very essence of spiritualistic, as opposed to materialistic philosophy," and that the deepest of all schisms is that which divides Animism from Materialism." [4]

It is quite evident therefore, that the reason why both of these renowned scientists have subscribed to the Vitalistic theory, lies in the fact that it fulfills more satisfactorily the requisites of a sound definition of life.

In his book entitled *Body and Mind,* McDougall discusses the several " so-called " scientific solutions, which have been proposed by some scientists, to explain the nature of life. After thoroughly examining them, he shows how miserably they failed to account for the ultimate reason of life; all assume life to be a mere mechanical reaction, while in reality it is diametrically opposed to any such conception.

One of the arguments which he proposes in favor of Vitalism, is that of the developing embryo, very similar if not identical with that of Driesch; because here, is an apparent teleological force directing its evolution to a very specific end.

> This power of persistently turning towards a particular end or goal, manifested in these two ways, namely, in growth and bodily movement, is the most characteristic feature of the life of an organism, objectively regarded. It seems to involve essentially teleological determination; that is to say, it seems to be essentially of the same nature, as the striving towards a goal or end that runs through all our inner experience, the

[4] McDougall, W., *Body and Mind,* London, 1928, p. ix.

> goal being present to consciousness with extremely different degrees of clearness and fulness. It seems to be quite impossible to explain such apparently teleological behaviour of organisms in terms of mechanism. Nothing analogous to it can be found in the inorganic realm.[5]

The mechanist, however, does not attempt to explain the phenomena in question, but rather takes an indifferent stand by hiding behind his pet shield of ignorance, claiming that

> an argument of this kind, relying as it does on our ignorance of details of cellular structure and on the limitations of our powers of constructive imagination, carries no conviction and is incapable of disproving this assumption.[6]

Such a reply, however, does not in the least discredit the Vitalistic contention which is based upon indisputable arguments of cause and effect; it renders suspicious, however, the Mechanistic explanation of life, because, as one may readily deduce from the quotation, it rests in many cases upon the ignorance of facts.

Another forceful argument, is constructed upon the failure of Mechanism to explain the unity of human consciousness. It is a demonstrated fact that, when two stimuli are simultaneously applied to the human sense-organs, they produce a single conscious change in the mental state of man, i. e., he becomes conscious of an existing phenomenon, of which he has not been previously aware. This joint action of the stimuli, does not take place in the nervous system itself, because, the nervous system is nowhere combined. Notwithstanding this fact, they produce nevertheless, but a single excitation of his consciousness. Wherefore, McDougall concludes, that it is but logical to suppose that these two sense impressions, stimulate in man, ultimately but one faculty; and since this cannot be material, because it is not found in the brain which is the last and only place of search, it must therefore be immaterial. Whence he states that it is necessary to admit a psychic entity, which you may call what you will, but which in essence is the "soul." Again he says:

> The facts of the relation of sensory consciousness to cerebral events thus render the conception of a unitary psychic being, call it the soul or what you will, a necessary hypothesis; for the rejection of this hypothesis involves either Pyrrhonism or the acceptance of a confused tangle of obscure conceptions (conceptions of fantastic entities such as the "threshold of consciousness," or unattached fragments of consciousness. . . .[7]

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[5] *Ibid.*, p. 243. [6] *Ibid.*, p. 239. [7] *Ibid.*, p. 298.

There are present in nature other psychical phenomena which reject any mechanical explanation. These are the hypnotic and post-hypnotic states of a hypnotized person, which often give rise to very interesting phenomena. Some of these more noteworthy occurrences, are the causing of blisters on different parts of the body, erythemata, and ecchymosis, by mere verbal suggestions. There have also been cases where through similar suggestions, the sight of one or both eyes was lost; wounds were healed rapidly, and all sense of pain suppressed, even though it might have been of the most severe type. McDougall argues:

> Now it is true that the production of these and similar effects involves only an extension or intensification of powers normally exercised by the mind over the body processes. But to say that, is not to deprive the facts of the significance that I would attribute to them. Rather, these instances of hypernormal mental control over body processes serve merely to place in a clearer light, to bring home more forcibly to us, the impossibility of explaining these processes on mechanical principles, the impossibility of exhibiting these psycho-physical processes as purely chemico-physical or mechanical processes.[8]

It is, McDougall's firm conviction, that Mechanism encounters serious difficulties, when it tackles the explanation of vital phenomena; and to a much greater extent, when it is called upon to account for psycho-physical inter-action. It fails to make intelligible, the unity of consciousness, because it rejects the single immaterial principle to which consciousness must be ascribed. The hypnotic phenomena all transcend its gross materialism; and the teleological features of a developing embryo, without the least fear, manifestly contradict the mechanistic doctrine. These facts have been respectfully ignored by many indiscriminate mechanistic philosophers, while its more discerning and free-spoken adherents often admit the inadequacy of their doctrine to explain them.

McDougall's Animism

As a remedy for these failures McDougall proposed the Anamistic theory, as a tangible explanation of all vital processes, in opposition and in preference to that of the Mechanists. There are present in the world, certain phenomena whose existence is unquestionable, and for which an account must be rendered; it is but logical, therefore, that for these known phenomena, an entity be described which would as faithfully as possible fulfill all the

[8] *Ibid.*, p. 351.

requirements. This task, McDougall, has accomplished by proposing the soul as the fitting "entity" which he describes as a being which:

> has no essential attributes of matter, namely, extension (or the attribute of occupying space) and ponderability or mass; for if it had these attributes it would be subject to the laws of mechanism; and it is just because we have found that mental and vital processes cannot be completely described and explained in terms of mechanism that we are compelled to believe in the co-operation of some non-mechanical teleological factors, and to adopt the hypothesis of the soul.[9]

It is apparent therefore, that in order to explain life it is necessary to admit a non-material agent, which in the opinion of this eminent psychologist may very conveniently be called the "soul."

A similar conviction is reechoed to-day by Donnan who though unwilling to be called a mechanist or materialist, believes firmly that,

> . . . the elementary phenomena of life are deterministic, that is to say, that events compensate or succeed each other just as in the psychochemical world of inanimate things, and that their compensations or successions can be exactly measured and expressed in the form of precise mathematical equations. Determinism exists just as much or, if you please, just as little, in the elementary phenomena of the living as in those of the non-living systems familiar to physics and chemistry.[10]

He is not astonished, however, that after a thorough examination of some vital processes, certain modern philosophers have become vigorous advocates of the vitalistic theory:

> The fertilization of the ovum, the growth of the embryo, the growth of the complete individual, the phenomena of inheritance, of memory, of adaptation, of evolution. Viewing these phenomena in the light of facts known to physics and chemistry, it is little wonder that some modern philosophers have followed in the steps of certain older ones and seen in the phenomena of life the operation of some strange and unknown vital force, some "entelechy"; some expanding vital impulse; or at least some new and undescribed form of "biotic" or "nervous" energy. It is difficult to resist the comparison of the developing embryo with the building of a house to the plans of an invisible architect.[11]

Yet it seems that such utterances of the lingering mechanists are but testimonies of the fact that mechanism has dismally failed in the attempt to explain the diverse phenomena of life, and it is

[9] *Ibid.*, p. 364.
[10] Donnan, "The Mystery of Life," *Report Smithsonian*, 1929.
[11] *Ibid.*, p. 312.

Current Opinions on the Inadequacy of Mechanism

because of this failure, that the trend in biology and in the sciences that are in any way concerned with the processes of life, is towards a non-mechanistic, though not always vitalistic explanation of life. Dr. Wildon H. Carr, Bergson's British disciple, believes that:

> So long as life and living processes are concerned, we get no help whatever towards their comprehension by the most exhaustive analysis of the physical and chemical structure of matter on which life is based. To comprehend life we must study it as a spiritual, i. e., non-material agency.[12]

A. E. Boycott, in a paper to the Royal Society of Medicine, states that,

> the attempt, to explain life by chemistry and physics has completely failed.[13]

J. S. Haldane who is a bitter antagonist of the Vitalistic theory, and believes that Vitalism in any form has the same fundamental defect as Mechanism, claims, nevertheless, that:

> From a physical and chemical standpoint the development and maintenance of the exquisitely delicate structures and activities which biological investigation reveals to us is totally unintelligible. We just have to admit that from the physico-chemical standpoint we are in presence of something which we do not understand—the "mystery" of life.[14]

A similar view was again expressed very recently by Rignano, in a new form of materialistic Vitalism (a monstrosity in my opinion) which he proposed in opposition to the Vitalistic and mechanistic systems hitherto advanced:

> It is for this reason (the consideration of life as a mere physico-chemical process) that the method of investigation which is deliberately confined to the recording of purely physico-chemical phenomena . . . *has not taken us a step further towards a knowledge of what life really is.*[15]

The few quotations just made, disclose one of the causes why the Mechanistic theory fell into a general disfavor even with those scientists who often view with disfavor certain forms of Vitalism.

[12] Carr, Wildon H., "Life and Matter," *Proceedings of the Sixth International Congress of Philosophy*, New York, 1927, p. 12.

[13] Boycott, A. E., "The Transition from Live to Dead: the Nature of Filtrable Viruses," *Annual Report of Smithsonian Institute*, Washington, 1929, p. 323.

[14] Haldane, J. S., *The Philosophical Basis of Biology*, Garden City, N. Y., 1931, p. 73.

[15] Rignano, E., *The Nature of Life*, New York, 1930, p. 121.

The reason for this aversion on their part lies in the fact that the several advanced mechanistic explanations have never succeeded to account for the ultra-physico-chemical element undisputably apparent in all life. They regard as indispensable a non-material "something" in every living being, and for this enigmatical "something" there must exist a corresponding non-material explanation which mechanism cannot offer.

Since it has already been stated in a general manner, that Mechanism failed because it could not render an adequate account of the numerous phenomena which appear in all living organisms, it is fitting to consider now one of those causes in particular.

Feeling or emotion which may be sorrowful if caused by pain, or joyous if brought about by a happy coincidence of circumstances, is exclusively proper to living beings, and as far as science has discovered, to a determined portion of them alone. Therefore, whenever a theory is advanced to explain the nature of life it must explain it in its entirety, because no sound system can evade the explanation of those effects, which are the results of the plentitude of life, this, nevertheless, Mechanism has failed to accomplish. It is well stated by Professors Kellogg and Balzoc:

> that, regardless of what the laboratory tells us, humanity will never accept the implied ultimate of the alchemist who says to his weeping wife. "Stay, I have decomposed tears. Tears contain little phosphate of lime, some chloride of soda, some mucous, and some water." Is there nothing more to a tear than this? Will humanity ever be willing to accept that analysis? In all probability it will not. Unless the findings of the laboratory fit in with the findings of humanity as a whole, it will do little good to attempt to force acceptance of them with any degree of finality.[16]

Failure of Mechanism

The inadequacy of the Mechanistic theory therefore, may be attributed to the fact that "the findings of the laboratory," do not as it appears, "fit in with the findings of humanity as a whole," because, the substratum of all reasoning is the cardinal axiom of cause and effect which mechanists so witlessly contradict. It is but logical to conclude therefore, that a theory which is deficient to such extent, will not appeal to an unbiased thinker.

This very difficulty was considered by Paul R. Heyl, in his presidential address to the Philosophical Society of Washington.

[16] Menge, Ed., *A Survey of National Trends in Biology*, Milwaukee, 1930, p. 63.

He seems to take a firm stand against the vitalistic idea of life; he would not explain the nature of life by introducing a principle alien to that already found in the body, were it only possible to do so; moreover, he maintains that:

> until a . . . common ground for the phenomena of living and non-living matter is recognized there must be a difference of opinion between the vitalist and the mechanist.[17]

He believes, however, that this common basis,

> must be something deeper and more fundamental than the molecules or atoms. In so far the vitalist is right; and in so far as he maintains that the interplay of atoms contains the key to the mystery, the mechanist is wrong.[18]

To admit, however, a principle which is different from the molecules and the atoms themselves, is to introduce an extra-material element; notwithstanding such a concession, however, the nature of life cannot be explained, because according to the author's wish it must be common to non-living as well as living beings. And so it is impossible to understand how such a common basis, would produce life in one, and not in the other, if the matter upon which it acts is the same. What is evident, however, is the fact that to explain life, it is necessary to admit "something deeper and more fundamental than the molecules or atoms." Is this enigmatical "something" a "vital force," an "entelechy," or a "soul"? Though this question be unanswered, Heyl does not hesitate to acknowledge the appearance of a transcendent principle in man, after life has once been established upon the earth's surface:

Heyl's Opinion on the Mechanistic Solution

> Life has attained such a complexity that a new set of phenomena is beginning to make its appearance, something different in kind from anything that has been before; as different in its turn as was life itself compared to inanimate matter; something superimposed upon life as life of old was superimposed upon the non-living. And it is, appropriately enough, in man, the highest type of life, the flower of creation, the peak of evolution, "the heir of all ages in the foremost rank of time," that this new thing makes itself manifest—a moral sense, an ethical feeling, which often finds itself as much a stranger in its environment as life must have felt among the crystals and colloids among which it began its existence. If we must find a single word to express this quality let us call it "Soul."[19]

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[17] Heyl, P. R., "The Lingering Dryad," *Report Smithsonian Inst.*, 1930, p. 212. [18] *Ibid.*, p. 212. [19] *Ibid.*, p. 213.

Thus from the quoted utterances, characteristic of the outstanding philosophers and scientists concerned with the progress of modern biology, it must be admitted that the present biological trend is towards a non-mechanical conception of life. True, that this tendency is not always rigidly vitalistic, and that it assumes at times a peculiar materialistic coloring, as in the case of Rignano, nevertheless, such singular instances do not contradict the general statement. Moreover, they prove to be of significant importance because they show that gross Materialism and rigid Mechanism as hitherto proposed are losing ground very rapidly. If, however, they are still defended, it is done solely because certain " so-called " scientists refuse to admit anything that is beyond the clutch of forceps or unseen with the aid of a microscope; for them the ultimate criterion of truth is the senses. The validity of this stand, however, cannot be sustained, because the results obtained thereof, point a ghastly finger at its inadequacy.

The culpable transgression of rigid Mechanism does not lie entirely in the denial of an ultra-material agent, but also in the negation of the basic axiom of all philosophy, namely, the existence of cause and effect. Modern philosophers believe that there exists instead a mere fortuitous sequence of occurrences one following the other without any interdependence. It was, however, the axiom of cause and effect that moved Dreisch, McDougall, and other eminent men of the twentieth century to postulate an adequate cause which would explain the unique development of a seemingly mutilated embryo together with various other vital and psychical phenomena; the effects were undeniably manifest, wherefore a commensurate cause had to be found. This axiom therefore, brought forth the present anti-mechanistic trend in biology.

The Axiom of " Cause and Effect "

What was, and still is necessary is not facts exclusively, for these we have and can furnish in an abundance, perhaps bewildering. What modern science lacks, however, is sound philosophy, consistent logic, logic of Bl. Duns Scotus, logic that is capable of subtle distinctions to discern right from wrong reasoning. Mechanism, Materialism, Monism, and other typical errors, are products of inconsistent reasoning, false interpretation of facts obtained in physics, chemistry, biology and other

The Necessity of Sound Philosophy and Logic

related sciences; and unless a sounder philosophy is employed no true progress will be made in any scientific pursuit; wherefore, it may be stated, in fine, that the cause responsible for the genuine advancement in biology to-day is the axiom of cause and effect and the sounder philosophy in the interpretation of biological facts.

DISCUSSION

FR. HUBERT VECCHIERELLO, O.F.M.:—In commenting on Fr. Baran's scholarly paper on the Present Vitalistic Trend in Biology, I should like to say that it shows an impressive amount of work and painstaking perusal of many of the outstanding authorities on the vexed subject under discussion. There is no doubt that today, more than ever before, scientists, especially biologists, are being compelled to subscribe to a vitalistic rather than to an out-and-out mechanistic conception of life in most of its phases. But it would be an exaggeration to suppose that these men believe that all vital phenomena are only explainable and understandable from a totally or solely vitalistic interpretation of the facts at hand.

The Vitalistic Trend of Today

Among non-Catholic scientists, this question does not involve the many serious consequences it does for Catholic scientists, simply because this problem is merely another of the many facing science. To non-Catholic scientists, even when they subscribe to a vitalistic interpretation of life and its myriad processes, the vital principle, entelechy, biotic factor, élan vital, or whatever one might wish to designate the hypermechanical agent controlling, guiding, and molding the course and development of any living organism, is not for a moment imagined to be something non-material, spiritual, or a substantial form as Catholics look upon the soul.

Non-Catholic Scientists and the Life Problem

By their mentality and training these men have come to look upon all scientific research as a laborious process of investigation and experimentation subject to certain ineluctable laws or factors which are either directly mechanical and material or the result of the sum-total of material agencies at work. Living organisms are thus subject to the same methods of treatment and interpretation as anything else. The vital factor, to them, is not an agent which is entirely material, yet they will not admit that it is spiritual or that it persists after the death of the organism as such.

The arguments of the mechanist may be briefly summarized as follows:

(1) Life is not mysterious. The assumption that life is something over and above the ordinary processes of change and activity which occur in all living organisms is a "hang-over" from primitive conceptions of life as something separable from the body. Life to them is actually, exclusively, and precisely what life does. In other words, if you study the manifold activities of the organism you study life; if you can explain these actions mechanistically, you have explained life because it is not something different from its activities and processes going on within it.

Arguments of Mechanists

(2) Great progress has been made in recent years in explaining vital phenomena mechanistically. Many activities which were once thought insoluble from a mechanical standpoint have of late yielded to an interpretation in

mechanistic terms. The continued advances of the sciences result in further analyses of this kind. There is every belief, they assert, that vital activities, which at present are deemed unintelligible from a mechanical standpoint, will eventually be analyzed in terms of physics and chemistry. The progress of the biological sciences along these lines warrants this conviction.

(3) Another argument they put forth is that the method of science is purely mechanistic. The most exact inductive sciences we have state their results in terms of mechanistic causation. The more precision and accuracy any science develops, the more it gets away from the vital principle and substitutes in its place mechanical principles of explanation. They conclude, that because the physical sciences are inevitably wedded to the belief that the only practical methods of science are essentially mechanistic, the same ideal or goal is to be sought in the biological sciences.

(4) Life, they further assert, becomes more intelligible, the more its explanation becomes mechanistic. If we fail to interpret vital phenomena mechanically, life is left mysterious and vague. The domain of the physical sciences is one of palpable, experimental objects; unless we can reduce life and its processes to the same experimental methods and procedures, we leave it a question-mark because non-mechanical entities are outside the scope and ken of science.

The Vitalists retort to these arguments by saying that:

Retort of Vitalists

(1) The organization of living beings is entirely different from anything in the inorganic world. As such, it does not come under the explanations of the mechanists because they cannot account for this superior organization. Non-living objects do not act like definitely organized living beings which are continually adjusting themselves to their environment for a definite aim or purpose, namely, their well-being and the fulfilment of their destiny. It may be called an engine but we must remember that it is "a self-stoking, self-repairing, self-preservative, self-adjusting, self-increasing, self-reproducing engine" (J. A. Thomson: *Bible of Nature*, p. 100), absolutely unlike a non-living engine. The living organism acts with a view to the good of the whole, its purpose of life is teleological because it tends towards specific ends.

(2) Living organisms cannot be treated as we treat inorganic substances. We can predict with precision what will occur under given conditions when working with inorganic materials, but living creatures are indeterminate and their actions unpredictable with any degree of certainty. This added characteristic of indeterminateness is the result of a non-mechanical factor operating in living organisms and absent in inorganic materials.

(3) Vitalists are willing to grant that many of the phenomena intimately connected with life can be explained mechanically, but they are unwilling to concede that all of them are thus explainable. There are many processes observable in living organisms which can only be explained and understood teleologically. Biologists are more convinced of this today than ever before because there are many phenomena which only lend themselves to a solution based on teleological causation. "The idea which gives unity and coherence to the whole of the physiology of respiration is that of the organic determination of the phenomena. The same idea has to a greater or less extent already given, or is in process of giving, unity and coherence to the phenomena of nutrition, secretion, and circulation. It is an idea which guides us at every turn in physiological work, and constantly suggests new lines of investigation. . . . By regarding the structure and activities of a living organism as the expression of organic unity we arm ourselves with a theory which is just as useful in biology as the idea of mass is in chemistry" (J. S. Haldane: *Mechanism, Life and Personality*, p. 88).

(4) Vitalists are puzzled to understand how life and its complexities can be explained mechanically. The experiments in physics and chemistry deal with lifeless, inorganic materials; life is something vastly different and not susceptible to the same laws and conclusions because science cannot deal with immaterial entities such as organization, purposiveness, aims, and tendencies. To the vitalist, then, a mechanical interpretation of life and its characteristic manifestations is utterly inconceivable if explained in purely mechanistic terms, because it leaves untouched so much that is baffling, inscrutable, and untestable by the most refined and most modern laboratory technique.

The Question Involved

Professor Tait remarks that "to say that even the very lowest form of life, not to speak of its higher forms, still less of volition and consciousness, can be fully explained on physical principles alone, is simply unscientific. There is absolutely nothing known in physical science which can lend the slightest support to such an idea. To suppose that life, even in its lowest form, is wholly material, involves either a denial of the truth of Newton's laws of motion or an erroneous use of the term 'Matter.' Both are alike unscientific." The point at stake behind this clash of opinions as to life and the explanations to be given to its manifestations is a large one because it aims directly at an Intelligent Creator, the causes at work in the development of the world-order, and intimately ties up with the question of monism or pluralism as the more acceptable hypothesis in explanation of things as we see them today.

Is there a Solution?

It is doubtful whether or not this question will ever be solved, but we should make ourselves acquainted with the points under discussion because of the far-reaching implications of either the one or the other theory. The question is a crucial one in more than an evolutionary sense, for it ultimately harks back to the existence of God as Creator, the existence of a spiritual soul, and the responsibility of human acts.

Life, that strange mysterious, unknown something, which flies through the viewless air, flashes through the ocean's depth, blushes on the petals of a rose, and manifests itself in a thousand marvelous ways and forms—what is it? Can science grasp, define or explain it? I doubt it.

FR. GILES KACZMAREK, O.M.C.:—Vitalism and Mechanism are two diametrically opposed solutions for the same obscure problem of life. In order to appraise the philosophic value of each let us consider briefly the fundamental tenets and motives for advancing these respective solutions, for, only after a critical examination of both shall we be able to select the plausible one.

Throughout the entire fabric of the Mechanistic solution there runs a grim dysteleological lining; all questions concerning the origin of life here on earth, its maintenance and functions were for a considerable period of time explained by mere "chance"; today, however, because of a dogmatic adherence to everything that claims to be scientific, the argument of "chance" has yielded to that of analogy, retaining, nevertheless, though somewhat in the background the "chance" explanation of Life's first appearance upon earth. Present day Mechanists delight in showing the similarities between inorganic and organic substances and from these apparently similar elements jump headlong into absurd and prepossessed conclusions, stating that there is no essential difference between the one and the other. The Mechan-

Mechanists and the Argument from "Chance"

istic philosopher who at one time based his entire proof upon an argument of "chance," shifted that secureness to an argument of mere "analogy." Because organic and inorganic matter resemble each other in some instances, the Mechanists proclaim them to be identical. Upon this point I am moved to quote Vernon Kellogg in an interesting passage:

> Altogether, then, in approaching the study of human life from the standpoint of a biologist who is not a bigot, but who is after all a biologist and not a theologian or metaphysician, we must take fairly into account all that the study of the rest of nature allows us to make use of in understanding certain aspects of human life, and yet must guard ourselves against the assumption that because we understand the life of starfishes pretty well we are sufficiently equipped with knowledge to be confident of explaining human life in terms of magnified starfish life.
> (V. Kellogg, *Human Life as the Biologist Sees it*, pp. 42, 43.)

Vitalistic Argument from "Cause and Effect"

The Vitalists, on the other hand, have always based their convictions upon solid philosophical principles. The principle as it appears to me is the one Fr. Matthew has mentioned, namely, cause and effect. Socrates, Plato and Aristotle taught that for a given effect there must exist a commensurate cause, and since life is an effect so different from other phenomena, they postulate quite philosophically a distinct principle which they have termed the "soul." This procedure was again lately confirmed in the varied biological, physiological and psychological experiments of such men as Hans Driesch, William McDougall, Vernon Kellogg and others. These men in the course of their scientific endeavors have noticed some very interesting phenomena, which they wished at first to explain by material means, but since nothing in the known material realm could render an adequate account for the same, and because their causes or motives had to be found, they described one, and from its unbiased description they found themselves defending an "entity" very similar to the "soul" of the Scholastics.

Vitalism Preferred

Of the two discussed theories, if we consider the soundness of their respective philosophical procedures, the Vitalistic method and contention, I believe, is decidedly superior to that of Mechanism. The Mechanists base their doctrine upon analogies which are superficial and accidental, the Vitalists, on the other hand, establish their teachings upon an axiom tested by centuries of philosophy's most scrutinizing investigations concerning the validity of which a reasonable difficulty has never been advanced. Moreover, I believe, that Edward Menge's view may be indorsed when he says that: "Too much time, beginning with Darwinism, has been wasted in useless speculation. Even now, too many biologists are spending time in speculating, instead of applying the experimental facts to their pet theories. Biological philosophy must be fitted to facts, not facts to preconceived notions. This, too, is being realized by such men as Jennings, Morgan, Wheeler, and a host of others." (Edward Menge: *A Survey of National Trends in Biology*, p. 53.) Of the same opinion is J. T. Cunningham, when he states that "I venture to suggest . . . that science is reason. Logic is sometimes taught in Universities as a substitute for Mathematics for the benefit of those who have little mathematical ability, but without logical reasoning, sound conclusions cannot be drawn from either measurement, experiment, or observation, even with the aid of mathematical methods." (J. T. Cunningham, *Modern Biology*, p. viii.)

The cause then, or at least partial cause, as explained by Fr. Matthew, for the present Vitalistic trend in Biology, is sounder philosophy in the interpretation of biological facts.

FR. VINCENT KROGER, O.F.M.:—Father Matthew's paper presents a logical sequel to the paper of last evening which treated of modern systems of philosophy. However, it must be admitted that the system of Mechanism is new in name alone. In principle it is the old philosophy of materialism applied to the science of Biology. To be sure, the modern forms of Positivism, Agnosticism and Scepticism have contributed greatly to the mechanistic interpretation of vital phenomena. But if these can be called philosophical systems they are negative rather than positive, because they reject previous explanations without supplying an interpretation which is satisfactory even to themselves.

Mechanism Not New

Therefore, instead of placing the responsibility for Mechanism with any system of philosophy I prefer to say that its presence is due to a lack of philosophical interpretation in the experiments of science. For more than a century scientists have separated themselves from all contacts with the sphere of philosophy. There was good reason for their complaint that philosophers had gone beyond all reasonable bounds of speculation, and that they had neglected almost entirely the practical wisdom of the living present. Still, the fact remains that scientists of the last hundred years have lacked the guiding and steadying influence of philosophy. The isolated "facts" of science have not been coördinated and interpreted, because all higher principles were regarded as false or doubtful; whereas their practical and universal application was deemed self-evident by the man in the street.

Science Divorced from Philosophy

The principle of causality becomes for the mechanist a mere sequence of phenomena because the nexus cannot be directly perceived by the external senses. Contradictories are identified in order to avoid all semblance of "metaphysical" principles. In a word, the presence of Mechanism is due to the absence of a philosophic system in science, or perhaps better, to the divorce of the lower from the higher sphere of knowledge.

THE EVOLUTION OF MAN—A BRIEF OUTLINE OF THE OPINIONS FOR AND AGAINST THE THEORY OF ANTHROPOLOGICAL TRANSFORMISM

Fr. Jerome Kobel, O.M.Cap.

Introduction

Once upon Eternity Almighty God decreed the creation of the world. Precisely how it was done will not concern us at the present moment. Once the world was here time began.

Once upon a time, then, the same All-wise Creator decreed the creation of man. Precisely how that was accomplished need not concern the human race. No matter how, when and where it had its inception, the human race can and must fulfill its eternal destiny. Nevertheless, these three problems—the causal factors, the era and the geography of it all—have occupied the minds of serious men. We will presently turn our attention to what some of them have said in the matter.

In a paper of this kind it is highly advisable to state at the very outset its scope, limitations, and purpose. The greater part of this paper will be a survey. Accordingly, there will not be an idea or a comment in it that has not already been expressed in some form or other. As a matter of fact, there are few men who have said anything new on the subject. At best the great majority of biologists and philosophers have merely extended or modified the opinions of a very few original investigators. My purpose, therefore, is to gather into one place, to categorize and to briefly evaluate the outstanding trends of anthropological evolutionary thought. I think this is the first time the Conference has treated this subject, hence this paper may serve as a starting point for future papers and discussions by the specialists among our Friars.

The available source-material on the topic is, simply enormous. The indication of the major sources could easily take up our

Wealth of Material

allotted time. Month after month the several magazines that come to our desks contain articles treating on evolution generally, and by inference on the evolution of man. Several dozen books on evolution have been written during the past two decades alone.

Some of the opinions cited in this paper may at first seem irrelevant. That would, indeed, be the case were the doctrine of evolution a mere claim of man's descent from a special form of creation. The word "evolution" implies immeasurably more than that. Evolutionists believe in a constant and orderly and universal change. That doctrine extends almost endless ramifications into the fifty-eight varieties, as it were, of biological research. More than that, the evolutionist seeks evidence for his theories from half a dozen or more extraneous sciences—physics, chemistry, ethnology, psychological physiology, stratigraphy, etc. On that account there cannot be any pretense at comprehensiveness in a writer dealing with the problem under consideration, nor has any sort of short cut yet suggested itself to the historian of anthropology.

Magnitude of the Problem

It is frequently customary in conservative Catholic circles to treat anything that smacks of evolution in a flippantly controversial fashion. There always will be controversy on this subject, but it seems deplorable that the opinions of many well-meaning men are not treated more sympathetically. There is, for instance, nothing essentially decadent in the notion of descent in any form save that which would militate against orthodox teaching concerning the rational soul. Yet, the mere suggestion of descent in its mildest form is greeted with abhorrence by some writers. Hostility, however, is in order when the adherents of evolution advertently transgress sound logic or when their opinions are in opposition to revealed dogma. The note of partisanship which will be heard from time to time in this outline has no animosity within it. Though not concurring with his opinions, it may be remarked in passing that I am appreciative of and indebted to Professor Henry Fairfield Osborn from whom I have personally received much of the data this paper contains.

No Reason for Abhorrence

The Philosophical Point of View

From the Greeks to the Fathers

Pre-Aristotelian Period

As already stated, there is nothing essentially new in modern biological thought. The history of this science is landmarked by anticipations, interpretations, rejections and modified revivals. Thus the notions about man's origin have run a gamut of meanings from the ridiculous to the sublime and back again.[1]

The early mythological guesses of the Greeks will not concern us here. The naturalistic and materialistic Greek philosophers assuredly did not believe in them. The Ionians and Eleatics (640-480 B. C.), of whom *Thales* and *Anaximander* are outstanding representatives, taught that life had an aquatic origin. Anaximander thought that men had first appeared as fish. The ancestors of modern man, he assures us, were encased in horny capsules from which they emerged to a life on land. Modern man, he argued, cannot be in his original condition, for he is utterly helpless for a considerable period of time after birth, a memorial, as it were, of his humbler origin.—Besides the ideas of abiogenesis and metamorphosis thus enunciated, there is a further significance in Anaximander's teaching. In comparing infantile helplessness

[1] Anyone who has read Osborn's, *From the Greeks to Darwin* (N. Y., 1929), will readily perceive some influence of that book on the next few pages. Dr. Osborn's thesis simmers down to this: The greatest minds of all ages have believed in evolution. The opinions of great men, however remote from our own times, are not to be ignored in forming an argument for evolution based on cumulative intellectual trends. However, Dr. Osborn's history was relied on by this writer only to the extent of consultation one uses in looking through a card index. Wherever possible the writings to which he refers have been directly consulted. I hold no brief for or against evolution in any form simply because it has been taught or repudiated by any number of great minds, past or present.

In *Thought* for March 1928, page 667, Dr. Richard Muttkowski incidentally criticises Osborn for endeavoring to bolster up the doctrine of evolution by an appeal to the ancients. Evolution, he says, must stand on its own eighteenth century legs. Similarly, Louis T. More in *The Dogma of Evolution* accuses the Doctor of giving very ancient thought a decidedly modern twist. Be that as it may, in some controversies, one opinion is as good as another. Against that of Muttkowski and More allow me to quote from Bishop Wm. Turner: "Evolution, in the sense of a transition from the simpler to the more complex, from the lower to the higher forms of existence, is a concept almost as old as philosophy itself. The evolution of the physical universe from a primitive mass by a process of purely mechanical changes was implicitly contained in many of the ancient and in some modern systems of philosophy. . . ." *History of Philosophy*, Boston, 1903, p. 618.

to the state of man in a capsule he anticipated the Recapitulation Theory of Haeckel. It is amusing to note that Anaximander did not concern himself with the all-important problem of adaptation in organization necessitated by so prodigious a change from a marine to a terrestrial milieu.

Anaximenes (588-524 B. C.), a pupil of Anaximander, was likewise an abiogeneticist. He held that all living things were produced from terrestrial slime. By this assertion he foreshadowed Oken's famous *Ur-schleim.*

Xenophanes (576-480 B. C.), the first paleontologist, also held that life arose abiogenetically from a primitive slime. *Parmenides,* his pupil, later taught the same.

Empedocles (495-435 B. C.), aside of adhering to the notion of spontaneous generation, taught a sort of " struggle for existence " and " survival of the fittest theory." He supposed that grotesque forms of all kinds had appeared directly from the earth. His doctrine contains a naturalistic explanation for the mythical appearance of centaurs (half-beast and half-man). Unable to reproduce and subsist such forms gradually disappeared. New beings arose and from imperfect, perfect forms gradually evolved. The " struggle " consisted in a conflict between two operating powers—love and hate or affinity and antipathy.

Democritus (450- B. C.), was a monist. He may be classified as the first comparative anatomist in so far as he perceived that single structures and organs were adapted to definite purposes.

Anaxagoras (500-428 B. C.), may be regarded as the first dualist and teleologist. Regarding man's origin he held that the " germ " of man, like that of all other living things, at first floated in the ether and was later fructified by contact with warm slime.

In the theories of these pioneers we find adumbrations of Darwin's Pangenesis (the theory that adaptations are transmitted by gemmules or material contributions to the germ from all parts of the somatic tissue) and Lamarck's theory of the transmittibility of acquired characteristics brought on by external and internal factors. Furthermore, the Greeks were primarily anthropocentric in thought; most of their speculations regarding life were exclusively concerned with man's development.

Aristotle was wholly dissatisfied with the vague speculations of

his predecessors; accordingly, in his *Natural History of Animals* he set up a system all his own. He was quite conversant with several phases of modern zoology, namely, homology, adaptation, unity of type or plan, physiological division of labor, and to some extent, histology. He anticipated the more crude theory of epigenesis (embryological development by differentiation of a previous wholly undifferentiated protoplasm). Though familiar with the notion of pangenesis and the inheritance of functional-modifications hypothesis, he did not accept them. *Sed bonus aliquando obdormit Aristoteles!*—he subscribes to the idea that mutilations are inherited. In Book VII, Chap. VI, of his *Natural History of Animals* he says in effect that cases are reported where parents bearing scars have transmitted the same to their offspring. He cites an instance from Chalcedon. A father had been branded with a letter. The identical letter though somewhat blurred appeared upon his child's arm.

Aristotle 384-322 B. C.

With regard to Aristotle's interpretations of nature and life there are several groups of commentators. Some, for instance, claim that he fostered the idea of abiogenesis; others immediately deny that! Again, there are openly divided opinions whether or not he was an outright evolutionist. For brevity's sake we shall confine our narrative to the opinions of two scholars'—H. F. Osborn and Fr. Henry Livingstone, S.J.—as representative of how divergent such interpretations may be. The case centers on a few passages from several books. The citations are apparently contradictory.

In his *Generation and Corruption* (Chap. IV), Aristotle assumes that the universe is made up of four mutually convertible elements—earth, air, water and fire. All bodies whether mineral, vegetable, animal or human, are composed of them. All bodies, moreover, are subject to change; the living (*The Soul,* Bk. III, Chap. 12) increase in size, mature, senesce and are finally resolved into the primary elements. Nature moves in circles. " The corruption of one thing is the generation of another." (*Physics,* Bk. III, Chap. 8.)

In another book (*The Generation of Animals,* Bk. II, Chap. 3) Aristotle acquaints us with his knowledge of the evolutionary theory. He dilates on the progressive process of corporeal formation whereby the simple advance to the more complex, the lowest

to the highest. Man, too, is a product of this sequence of purposive production. At first he has been an inorganic substance, then a plant; he rose to the status of animal and finally attained the peak of humanity. Perfect forms comprise the less perfect and have something in addition.

Aristotle wrote at length on reproduction. Ordinarily, he says, living things are produced by seeds, egg or foetus. However, some plants and some lower forms of animals arise from the soil, from water, or from decaying organic matter. In Bk. I, Chap. 7 of his treatise on *Plants* he even gives instances of the transformation of species: "Thus, for instance, they say that the calaminth is changed into the mint, and the goat-wort, if cut off and planted near the sea, becomes wild-thyme," etc.

In the *Generation of Animals* (Bk. II, Chap. 7), he records the current accounts of hybridity, and adds "These mongrels, they say, are also fertile among themselves, with the exception of the mule, which is always barren."

Finally, Aristotle approaches the question of man's origin on earth. He believed in the eternity of matter and life, and consequently devised only a hypothetical answer. "Concerning the first generation of men and animals—if they ever had a first beginning, as some maintain—you will not be rash in concluding that they arose in one of these two ways: either from a worm or from an egg. For since they must have food for growth and nourishment, this must be stored either in themselves or in the concept. We confess, then, that such a generation is either from an egg or form a worm. But it is less likely to proceed from an egg, for we see no generation of animals in this way; whereas from a worm we see animals generated, both those with blood and those without."

"These passages," writes Prof. Osborn, "seem to contain absolute evidence that Aristotle had substantially the modern conception of a progressive ascent of life from a primordial, soft mass of living matter to the most perfect forms, and that even these he believed were progressing to higher forms." (*Op. cit.*, p. 87.)

Father Livingstone, on the other hand, insists that one must be thoroughly acquainted with the system of Aristotle before concluding that the philosopher taught evolution. Such passages that seemingly propound evolution must be interpreted in the light of

others wholly at variance with the few citations which merely point out Aristotle's acquaintance with the teachings of other men. Father Livingstone advises us to understand Aristotle's method—an admixture of tolerant chronicle-writing and evaluations in advance of his own theorizing. Father Livingstone's opinion in this matter is worth quoting at length: "In opposition to the theory of evolution Aristotle lays down the general principle of the fixity of species—like begets like. (*Metaphysics,* VII, tx. 28.) To show the fallacy of evolution, he proceeds as follows: 'If we suppose that a species generates a different species and this in turn another different species and so on, it is evident that such a process would give rise to an infinite series of changes; but nature avoids the infinite. For the infinite has no end, whereas nature always has an end in view in all its operations.' (*Physics,* Bk. II, Chap. 8, tx. 82.) In the next place the constant mutation of species supposes an innate tendency in living beings in direct contradiction to another innate tendency of nature whose presence is acknowledged by all; that is, the instinct of self-preservation. . . . The instances of change of species in plants recorded by Aristotle on hearsay are clearly the product of the gardener's art; probably too, by species are meant what we now call varieties. The jocose way in which he mentions the accounts of the fertile mating of different genera of animals in Africa shows that he considered them to be merely travelers' tales.[2] The other instances, which he regards as genuine, occur but rarely, are exceptions to the rule, and are inferior in nature; whereas the theory of evolution supposes them to occur regularly, according to a fixed law, and to be superior in nature." (*The Ecclesiastical Review,* Sept., 1925, pp. 234-236.)

Between Aristotle and the Early Fathers there are several philosophers of high repute, for example, Lucretius, Galen, Pliny; but their anthropologies add nothing new to the evolutionistic theories of their predecessors.

The Patristic Attitude

In recent years the writings of Saints Ephrem, Basil, Gregory of Nyssa, John Chrysostom, Ambrose and Augustine have been the objects of a harrowing scrutiny on the part of the advocates

[2] Aristotle quotes the proverb: "Africa always has something new to offer."

and opponents of organic evolution. To re-investigate the writings of the individual Fathers would take us too far afield; the nature of this survey would not warrant it. Special attention, however, will be given to one or the other of the opinions attributed to individuals among them. The mutual dependence and the overlapping of the philosophical and theological ideas and conclusions contained in their works necessarily preclude separate resumés for the first and second larger divisions of the outline.

The *Rationes Seminales*

In the minds of several students of the Fathers there is but little doubt, and in some cases, no doubt at all that these early Christian writers were inclined to hold a modified theory of evolution. In other words, we are told that the Fathers aforementioned held as probable an opinion that different forms of life appeared, *congruis temporibus et locis,* without special acts of the Creator, by virtue of the so-called *rationes quasi seminales* (St. Aug.) or "after the manner of a certain spermatic (generative) power" (St. Greg.), implanted, as it were, in the first inanimate and homogeneous matter. Sir Bertram Windle (*The Church and Science,* St. Louis, 1917, p. 338), asserts that such a "mediate" or derivative creation as may be found in St. Augustine's writings, met the approval of Cornelius a Lapide, St. Thomas Aquinas and Suarez. In recent years Fr. Nicolas Monaco and Fr. Eric Wasmann, both Jesuits, have sponsored the same opinion. Father Wm. Hornsby, S.J., writing in the *American Ecclesiastical Review* (Jan., 1924), adequately indicates the sense in which St. Augustine used that phrase *rationes quasi seminales.* In substance he says that those "seed-like principles" were, according to the Saint, as numerous as the species produced. Each such "principle" eventually produced one fixed species.

An interesting debate was carried on from January to June, 1899, by Fr. Burton, C.M., who denied that St. Augustine was an evolutionist in any sense whatever, and Fr. Coakley, O.S.A., who defended the more or less traditional view that the Saint maintained a theory of "potential" creation of animals. (*Irish Ecclesiastical Record.*)

Commentators, however, differ widely among themselves upon inquiry whether the Fathers taught transformism (in its widest sense) or not. Canon Dordolot and Fr. Ernest Messenger have

Specific Teachings of the Fathers

written at great length [3] to prove that the several Fathers already alluded to did believe in the transformation of species. Canon Dordolot restricted his investigation to the writings of Sts. Basil, Gregory of Nyssa and Augustine. Fr. Messenger, a pupil of the Canon at Louvain, extended the scope of the first publication. He does not, however, advocate any one theory of evolution as did Dordolot. The books of these two priests form excellent compendia of patristic quotations for and against transformism. Their critics, both favorably inclined and those in opposition, are not always in accord with the interpretations of these two scholars. Be that as it may, a brief enumeration of their conclusions will suffice. The authors maintain that:

1. The Fathers taught the Creation by God of Adam's soul;

2. According to the Fathers, Adam's body came from the earth, some implying that it came " immediately " from the dust or slime, but that St. Gregory of Nyssa seems to indicate intermediate stages of an organic nature;

3. The Fathers variously interpret the Divine activity in the formation of Adam, some asserting that it was a " special " divine work, whereas others do not consider anything " special " about the formation of man save the endowment with a rational soul;

4. The Fathers neither affirm nor deny the operation of secondary causes in the formation of the first man;

5. Although St. Gregory may, in a sense, be classed as an outright evolutionist (since he went to the extent of including the entire human race in the " first creation," not even excepting the human soul), we cannot follow him in every respect because the weight of authority is against him. There is nothing unorthodox, however, about accepting his tenets with regard to the creation of the human body;

6. " Saint Augustine says definitely that the body of man was contained completely in the original causes created at the beginning of time. He only hesitates as to whether these causes determined not only the fact of production, but also the manner."

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[3] *Darwinism and Catholic Thought*, Benziger Bros., 1922; *Evolution and Theology*, Macmillan, 1932.

The Scholastics

Between the Fathers and the Scholastics there appeared a writer of note in the person of *Scotus Erigena* (800-). He reflects the mental temper of his day. With respect to his teaching on the origin of things he seems to echo the theory of Aristotle and Saint Augustine. The following passage, gives us the gist of his opinions: "From the Uncreated Creating principles go forth created and self-created beings under the embracing *causae primordiales.* The *causae* are equivalent to the Greek 'ideas,' that is, the kinds, the external forms and unchangeable grounds of reason upon which the world is regulated. Under the influence of the third person of the Godhead, the potentialities of matter are developed, out of which creatures take their origin. In a retrogressive circle, all things return to God."

To those who are unfamiliar with Scholastic terminology it will always be a foregone conclusion that several of the mediaeval schoolmen taught absolute transformism. On the other hand there are numerous investigators who will not so much as concede that the Scholastics' rejection of evolution is an open question. The latter insist on the basic distinction between "spontaneous generation" to which several of the schoolmen, including St. Thomas, subscribed, and organic evolution or transformism which they contend never obtained in Catholic tradition.

The doctrine of the Scholastics generally and of St. Thomas in particular with reference to the origin of species, may be reduced to three propositions:

Scholastics and the Origin of Species

1. While admitting with Aristotle the "fact" of spontaneous generation, they restricted the phenomenon to very few forms of animal life.

Irrespective of its being a possible flaw in his dialectics or mere oversight, or lack of experimental observation St. Thomas endorsed the perennial notion of a *generatio equivoca*—a relict of Greek philosophy. In so doing he fell in line with the generally accepted knowledge of his day. Vermin and certain reptiles were said to arise abiogenetically from mud. The active principle, according to St. Thomas, which brought about such a generation resided in the heavenly bodies.[4]

[4] "The heavenly bodies have not a specific likeness to the bodies here below. Their likeness consists in this, that by reason of their universal power, whatever is generated in inferior bodies, is contained in them. . . ." (*Physics*, II, 2 ad 3um.)

Aristotle's notions in this matter have already been cited. In one of his *Georgics* Virgil seriously imparts a rather unusual recipe for the production of bees. A bullock is to be killed without lacerating its hide. The nostrils are to be blocked with mud. After several weeks a great buzzing will be heard from within the decomposing carcass. Forthwith myriads of bees will emanate from the putrid mass. Now this is plainly a case of mis-interpretation of an otherwise well-established fact. A certain Egyptian robber-fly closely resembling the honey-bee lays its eggs on decomposing bodies. In all likelihood Vergil was unaware of that fact.

2. A direct creation by God is postulated for the production of the majority of animals. The following passages are usually quoted as illustrative of their views:

"In the first production of things this active principle was the Word of God, which produced animals from the matter of the element (water or earth), either actually, according to other Saints, or virtually, according to St. Augustine." (Sum. I, Q. 115, Art. 3, ad 2 & 3.)—"God produced the first creatures perfect at once, without any other previous disposition or operation of any creature; since He so made the first individuals of species that by them (their) nature might be transmitted to (their) posterity." (1-2, q. v. 7 ad 2um.)

3. There is no implicit or even explicit mention of evolution in any of the works of St. Thomas, but he does mention the fixity of species, for instance: "Those things which belong to the nature of the species are transmitted by parents to their offspring." (*Sum. Theol.*, 1-2, Q. 81, 2.) Furthermore, St. Thomas and the Scholastics generally were wont to appeal to that principle of philosophy, namely: *Operari sequitur esse.* In other words, each thing acts according to its nature and on that account "it belongs to the nature of the thing which begets to beget offspring like to itself according to the form." By "form" they understood that principle determining the nature of the species. Consequently, there can be no change of species when generation takes place in accordance with that determining principle.

Aristotle's two arguments against the transmutation of species, namely: that such a generation of new species would suppose an inherent tendency toward self-annihilation, and would, moreover, give rise to an infinite series—were wholeheartedly taken over by Scholastic philosophy.

A few lines from Duns Scotus may throw some light on the mediaeval interpretation of the Augustinian "seminal reasons": "It is to be noted that there is a certain formative virtue in the seed which is to the nature of the thing conceived what the plan of the house is to the bricks and timber; except that the plan is extrinsic to the materials, whereas the virtue of the seed is intrinsic." (*Met.* Disp. 18, sec. II, paragr. 30.)

St. Thomas, sensing, as it were, that transformism might be attributed to the somewhat prevalent Scholastic notion that the human foetus was successively animated by a vegetative soul, the animal soul, and ultimately, by the rational soul, formulated this objection and its answer: "If, then, there was in the embryo, before the advent of the rational soul, a soul that was not rational, there was there an animal of a different species; and so, a man could not come from it; for different species of animals do not change into one another. Reply. I answer that the embryo, before it has a rational soul, is not a perfect being, but is on the way to perfection; hence, it comes under no genus or species except it be referred to the perfect species toward which it is tending; just as any imperfect thing is referred to a perfect thing of the same kind." (Treatise *De Potentia* Q. III, art. 9, Obj. 10.)

The versatile *Leonardo da Vinci* (1452-1519), was intensely interested in fossil remains. His observations in the field of paleontology, however, bear no influence on the anthropological teaching of his day.

Giordano Bruno (O.P.) (1548-1600), noted for his outright rationalism, dabbled to some extent with theories of evolution. Lasson considers Bruno as an exponent of Empedocles, in which case he would have been a forerunner of Darwin. Krause, on the other hand, interprets the subjoined passage in the sense of Bruno's having maintained the identity of the animal and rational souls and not as a statement about any sort of unity of origin. The disputed text reads:

The mind of man differs from that of lower animals and of plants, not only in quality but in quantity. . . . Each individual is the resultant of innumerable individuals. . . . Each species is the starting point for the next. . . .

To those who perceive transformistic significance in the Fathers and Scholastics, the name of Francesco Suarez, S.J., (1548-1617), is little short of being anathema. He was a fixist, a special-crea-

tionist or whatever you will. Mivart futilely endeavored to identify his (Suarez's) teaching with the views of those who held or are said to have held a brief for derivative creationism. A cold-blooded analysis of his statements, however, narrows his views down to the bare concession that new "species" may arise from commingling, as, for instance, the mule and the leopard! Whereupon we might begin a delightful Donnybrooke affair over the perennial question—"What constitutes a species?" Professor Osborne assures us that consequent upon Suarez's *Tractatus de Opere sex Dierum,* ". . . all classes of theologians departed from the original philosophical and Aristotelian standards of some of the Fathers of the Church, and that Special Creation became the universal and orthodox theologic teaching from the middle of the sixteenth to the middle of the nineteenth century." (*Op. cit.,* p. 130.)

The Interval Between Suarez and Lamarck

Francis Bacon (1561-1626), though not advancing an original evolutionary hypothesis wrote at length on the mutability of species brought about by accumulating variations.

Descartes (1596-1650), championed Causo-mechanism and proceeded to explain the universe in terms of "gradual development" as opposed to "sudden creation."

Gottfried Wilhelm Leibnitz (1646-1716), advocated two principles which have had no little amount of influence on biological thought since his time. The first is his Principle of Continuity, namely: "All natural orders of beings present but a single chain, in which the different classes of animals, like so many rings, are so closely united that it is not possible either by observation or imagination to determine where one ends or begins." The evolutionistic implication is self-evident. He accounted for variations by the great changes in environment. "Indeed," he wrote, "it is credible that by means of great changes (of habitat) even the species of animals are often changed." (*Protogae,* xxvi.) With reference to man he wrote that all advances wrought by nature in his regard were made by degrees and not by leaps. The Second Principle—Force is the ultimate reality—distinctly labels Leibnitz as a Causo-mechanist.

Emanuel Kant (1724-1804), had difficulty in steering between two extremes—mechanism and teleology. Finally, however, he

ascribes "to the common mother (Nature) an organization ordained purposely with a view to the needs of all her offspring, otherwise the possibility of suitability of forms in the products of the animal and vegetable kingdoms cannot be conceived at all." Man is not excluded from his scheme of development. We are assured, among other things, that man, at one time, had a "quadrupedal attitude." Furthermore, "this analogy of forms (in so far as they seem to have been produced in accordance with a common prototype, notwithstanding their great variety), strengthens the supposition that they have an actual blood-relationship, due to derivation from a common parent; a supposition which was arrived at by the observation of the graduated approximation of one class of animals to another, beginning with the one in which the principle of purposiveness seems to be most conspicuous, namely, man, and extending down to the polyps . . . and arrived finally at raw matter." (*Criticism of the Faculty of Judgment,* 1790—quoted by Haeckel in his *History of Creation,* 1892, I, p. 108.)

Lessing (1729-1781) and *Herder* (1744-1803) came under the influence of their immediate predecessors, stressing, however, "unity of type" and conformity "to a main single plasticity of organization." (From Herder's *Ideen zur Geschichte der Menschheit.*)

The march of evolutionists kept up in an unbroken order. For a century (the eighteenth) the trend was most speculative. Abiogenesis and metamorphosis had their heyday. DeMaillet's extravagant "mermaid-derivation" of man is an instance of this. Two names of priests—Fathers Bonnami and Athanasius Kircher—are linked up with the absurd fantasies of this period. Kircher, for instance, in his *Mundus Subterraneus* "authentically" describes orchids giving birth to small birds.

Absurd Fantasies

De Maupertuis (1698-1759) indistinctly formulated what we know as Haeckel's "Perigenesis of the Plastidules." In 1746 he wrote: "The elementary particles which form the embryo are each drawn from the corresponding structure of the parent, and conserve a sort of recollection of their previous form, so that in the offspring they will reflect and reproduce a resemblance to the parents. . . ." (*Systeme de la Nature: Essai sur la Formation des Corps Organises.*)

Although it was called "evolution" at the time, the various

preformation and epigenetic theories of "unfolding of the miniature" and "differentiation," respectively, are not theories of transformism in its present connotation.

Charles Bonnet (1720-1793), while subscribing to embryological preformationism or the "expansion of the invisible into visibility" in the sense that each species contains within itself all future generations of its progeny on an infinitesimally small scale, based his theory of development on Leibnitz's law of Continuity. It precluded successive acts of creation and postulated a single original act of the Divine Will. Thereafter the universe progresses on its own inherent force.

J. B. Robinet (1735-1820) conceived the universe as a vast laboratory in which Nature has succeeded in several experiments: the orang-outang, the horse, dog, and man, and may yet replace the last named by the long awaited superman. His evolutionary system contains the idea of one direct line of descent, the numerous species of today having arisen from priordial germs.

Lorenzo-Oken (1776-1851) has already been referred to as the propounder of the *Ur-Schleim* theory. "All life is from the sea," he wrote, the whole sea is alive. Love arose out of seafoam," and similar nonsense. Man had his origin on some warm and gentle sea-shore probably near India. The extent of absurdity to which Oken pursued his theorizing may be seen in the following passage: "Man has not been created, but developed. So the Bible itself teaches us. God did not make man out of nothing; but took an elemental body then existing, an earth-clod or carbon; moulded it into form, thus making use of water; breathed into it life, namely, air, whereby galvanism, or the vital process arose." (*Lehrbuch der Naturphilosophie,* 1810, p. 192.)

Carl von Linne (*Linnaeus*) (1707-1778), was primarily a taxonomist. To him we are indebted for the modern binomial nomenclature, for example, *felis catus,* whereby the genus and the species are indicated. At the outset of his career (from about 1735-1751) he was a confirmed fixist. He adhered to the current practice of limiting the number of individuals in a species, seeking reasons for keeping organisms apart, thus drawing sharp lines of demarcation in his taxonomy. The words *nullae species novae* constantly recur in his works. He expressed Leibnitz's aphorism *natura non facit saltum* in a manner all his own—"We reckon as many species as issued in pairs from the hands of the Creator."

Nevertheless, in 1762 he modified his views, including as "species" those organisms which arose by intercrossing. Thus he wrote: "All the species of one genus constituted at first one species; (*ab initio unam constituerunt speciem*); they were subsequently multiplied by hybrid generation, that is, by intercrossing with other species."

George Louis Buffon (1707-1788) was at first a staunch advocate of Creationism. But his opinions were damaged by a rather shoddy method followed by himself and other contemporary anatomists. In 1755 he was able to write this: "The pig does not appear to have been formed upon an original, special, and perfect plan, since it is a compound of other animals; it has evidently useless parts, etc." (*Natural History,* 1755, tomus V., p. 103.) By 1761 he was amazed at the rapid and frequent mutability of species brought about by the direct influence of the environment. Despite these concessions he endeavored to straddle the opposition between a literal *Genesis*, and the seeming evidences of zoology to the contrary. The notion of "unity of type" was a bugbear to Buffon. In his estimation it demanded that until another explanation were forthcoming, a remote community of origin be ascribed to man and the ape, to the horse and the ass. Asses, he argued on that assumption, are degenerate horses; apes are degenerate men. The terms "perfectionnement" and "denaturees" (in the sense of an environmental modification of an originally perfect type) recur again and again in his later works. No one seems able to discern whether he meant "evolution" in its present acceptation, or, being confronted by homological difficulties he wrote with ironical though not logical intent.

Erasmus Darwin (1731-1802) was the grandfather of Charles Darwin. Suffice it to say that he advocated these factors in his system of evolution: A creator (The First Great Cause) of original organisms into which powers of development were implanted; spontaneous generation of lower organisms; metamorphosis; a possible descent of man from the monkey; the inevitable struggle for existence; modifications brought on directly ("efforts" and "perpetual endeavors") by the organism itself, but indirectly by the environment, and thereafter inherited by the offspring. Life, he wrote, began in a single thread-like filament. His writings are replete with amusing, sometimes instructive at other times inaccurate observations in the fields of adaptation (secondary sexual characters, mimicry, etc.).

Erasmus Darwin

The eminent geologist, *George Cuvier* (1769-1832), for a considerable time reversed European speculation as to the origin of species. His definition of " species " prevailed until Charles Darwin published his hypothesis in 1858. This is Cuvier's definition: "All the beings belonging to one of these forms perpetuated from the beginning of all things, constitute what we call species." His ideas on the " transformation " of floras and faunas as recorded in rocks and fossils may be reduced to this minimum: Apparently new floras and faunas were not created on the spot but at the time of " sudden revolutions " (subsidences of the earth's crust) they migrated to the places where they are found, which migration became possible by the temporary bridges between the continents.

Gottfried Treviranus (1776-1837), an evolutionist of some note, stressed environment as " the " causal factor in effecting specific transformations. Man is included in his scheme of evolution.

Isidore St. Hilaire (1805-1861) advocated transmutation of types and forms by hereditary transmission up to the point where new races appear, e. g., the natural history of Chinese, Hebrews, Persians, etc. But that is manifestly not evolution in its present signification.

One might reasonably ask—what is the ' upshot ' of all this; what connection, if any, has this outline of more or less divergent views and fancies to do with the " Evolution of Man "? My purpose in disturbing the bones of Yorick is to show that the idea of organic evolution has itself undergone a long process of evolving; that " evolution " as it is understood and taught today is not the exclusively modern thing that some writers would make it; that, as a matter of fact, a bare minimum of newness was added to it by Lamarck, Darwin, Huxley, Wallace, Haeckel, either individually or collectively, all of whom popularized and exploited the theories of their predecessors. Their " genius " consisted in the ability to reduce hitherto crudely expressed notions into formulas and laws. With that in mind, and lest this paper become too cumbersome, the treatment of Lamarckism, Darwinism and DeVriesism will be done quite summarily.

Lamarckism

Jean Baptiste Pierre Antoine de Mont, known as Chevalier de Lamarck, lived from 1744-1829. He began his scientific studies

as a fixist and always remained a Theist (Catholic). In 1809 he published the *Philosophie Zoologique.* He had been deeply impressed by the variety and ascending scale of perfections observable in all ranks of organic life. "Should one think," he wrote, "that nature had produced successively these different bodies endowed with life, proceeding from the simplest to the most complex?" (*Introduction to the Philosophy of Zoology.*)

Lamarckism, then, reduced to its barest essentials is contained in the "Two Laws" which he later divided into four. In substance the two versions are identical. Thus:

First Law: In every animal which has not exceeded the limit of its development, a more frequent and continuous use of any organ gradually strengthens, develops, and enlarges that organ, and gives to it a power proportional to the length of time it has been so used; while the permanent disuse of any organ imperceptibly weakens and deteriorates it, and progressively diminishes its functional capacity, until it finally disappears.

Second Law: All the acquisitions or losses wrought by nature on individuals, through the influence of the environment in which their race has long been placed, and hence through the influence of the predominant use or permanent disuse of any organ; all these are preserved by reproduction to the new individuals which arise, provided that the acquired modifications are common to both sexes, or at least to the individuals which produce the young. (*Philosophie Zoologique,* I, p. 235.)

All this has come to be known as the "theory of use and disuse," the "want-and-development" principle, the theory of "orthogenesis," or the acquisition of an organ through the operation of internal factors pursuing a direct line of development.

The reception accorded to Lamarck's doctrine—the ridicule by Cuvier and Darwin, and the obloquy into which it fell until quite recently—is of secondary importance. The present favor and disfavor which attaches to it is our chief concern.

Among the *antagonists* of the theory we find:

Antagonists of Lamarckism

1. *Fr. Barry-O'Toole*—who declares that it "flouts experience and ignores the now demonstrated existence of internal hereditary factors." (*The Case against Evolution,* N. Y., 1924, p. 53.) He declares that Lamarck's assumption that acquired characters are transmitted through inheritance is entirely unwarranted. (*Ibid.,* p. 9.)

2. Acquired characteristics, writes *G. H. Parker* of Harvard, "are as a matter of fact just the class of changes in favor of the inheritance of which there is the least evidence." (*Biology and Social Problems,* p. 103.)

3. *Dr. Hogben* refuses to treat Lamarckism seriously for the plain reason, he declares, that the heredity of somatic modifications is unproved. (*Discovery,* June, 1924.)

4. The evidence for the inheritance of modifications, says *Conklin,* is unsatisfactory. (*Problems of Organic Adaptation,* Rice Institute, Oct., 1921, p. 331.)

5. *Fr. E. J. Burke, S.J.,* of Fordam, declares that "the fact of transmission of acquired characters is a great desideratum in the theory of evolution." (*Zoology,* p. 111.)

6. *Dr. Knight Dunlap* (Johns Hopkins U.), writing in *Science* for December 13, 1929, maintains a decidedly skeptical position in this matter. It is worthwhile quoting him at length: "The efforts to demonstrate the 'transmission of acquired characters' which have been made so far seem to be based altogether on analogy of cause and effect. . . . Now it is not impossible that in certain cases effects may resemble causes, but the antecedent probability of such resemblance must, in any given case, be exceedingly small. . . . Let us take an illustration. It has been believed that if parents engage systematically in intellectual pursuits of certain kinds their activity may affect their progeny. There is nothing foolish in this assumption, *per se.* It is, in fact, a hypothesis which may be experimentally useful. But the effects, and the only effects, which have been postulated by the neo-Lamarckians are effects resembling the causes, namely, increased intellectual efficiency of the same kind on the part of the progeny. This is indeed an assumption which has only an infinitesimal probability of accuracy." (p. 567.)

7. Addressing the National Academy of Sciences at New Haven in November 1931, *Dr. H. F. Osborn* said: "Among the old hypotheses of evolution, paleontology proves that Lamarck was wrong in his main assumption that acquired characteristics are inherited, Darwin was wrong in adding Lamarckism to his original selection theory. DeVries was wrong in believing that species arise by the selection of fortuitous mutations; Weismann was wrong in his subsidiary super-selection assumption that for-

tuitous variations of the germ plasm give rise to new species." Then he (Osborn) announced his "new concept of evolution" in these statements: "Variation of the species is the result of an original creative pattern within the gene-plasm which is there from the beginning"; "Evolution is centrifugal, developing outward from within the gene-plasm and from forces within itself." The details of Dr. Osborn's theory of "Aristogenesis" will be set forth in connection with the opinions and verdicts of the geneticists.

8. Although a confirmed evolutionist, Thomas Hunt Morgan boldly assures us that the "new work in genetics has struck a fatal blow at the old doctrine of the inheritance of acquired characters. . . ." (*The Scientific Basis of Evolution,* p. 187.) Incidentally, he scathingly rejects the more or less popular notions concerning maternal impressions upon the unborn child. The following from the foremost empirical geneticist of our times clearly indicates the inconsequential evidence of the Lamarckian hypothesis. Morgan's dogmatism in this matter is fortified by a wealth of strictly supervised experimentation, numerous instances of which are recounted in his book from which we quote. Lamarck's teaching, he says, reveals "the weakness and futility of one attempt after another—a veritable nightmare of false logic, of insufficient evidence, of mistakes of many kinds, and of sensationalism rampant." (*Op. cit.,* p. 191.)

9. In an address at the dedication of the Whitman Laboratory at the University of Chicago, June 4, 1926, *H. S. Jennings* made these remarks anent the futility of experimentation in endeavoring to prove the inheritance of somatic changes: "Stock is subjected to given environment. After a few generations it is found to be changed; the change is inherited even upon restoration to the usual environment. Behold! We have discovered the inheritance of acquired character. And then selective elimination is found lurking beneath the surface, and we know not what we have discovered. . . . Wherever in experiments there is superabundant production, whether of motions, of chemicals, of genes, of germ cells, of individuals, so that only a part continue—beware, for in such does the demon of selective elimination lurk." (*Science,* July 30, 1926.)

So much, then, for adverse criticism of Lamarckism. Sir Bertram Windle, deploring the ridicule accorded Lamarck's theory, wrote this: "What Lamarck taught was, that there was

an inherent tendency to vary in living organisms; and that stress brought out that tendency in a direction favorable to the animal. Thus, Lamarck, tried to explain the origin of variations, a matter which Darwin took as 'given'. Lamarck's theory obviously has a metaphysical background, which renders it anathema to those who regard all metaphysics as 'mysticism', and as irretrievably damned when dubbed with that fatal name." (*The Evolutionary Problem as It Is Today.* N. Y., 1927, pp. 23-24.)

Adherents of Lamarckism

That statement is obviously neither for nor against Lamarckism, but it is a plea that in future both sides in disputed questions be given a fair hearing. The genetical implications of Lamarckism, I repeat, will be summarized in their place. My aim at the present is to cite only names and opinions. Among those who either professedly or by inference are to be classed as adherents of Lamarckism we find:

1. Prof. *Ernest Wm. McBride,* an outstanding zoologist, who holds that Lamarckism has been tried and found to be true. (*Nature,* Jan. 17, 1925.)

2. *Louis Trenchard More* (U. of Cincinnati) recalls that "only after facts had multiplied, showing the inadequacy of natural selection, did biologists begin timidly to take Lamarck's doctrine seriously. If one can read the signs aright, we may expect to have an increasing attempt to explain the cause of evolution by the inheritance of acquired traits. The reluctance of the biologists to accept this doctrine does not rest so much on the lack of experimental verification as it does on the fact that Lamarck's cause of variation is fundamentally vitalistic in so far as it acknowledges the influence of the will or desire. To admit such a cause is contrary to scientific and to mechanistic monism." (*The Dogma of Evolution,* Princeton University Press, 1925, p. 184.)

3. Dr. *Ales Hrdlicka* prefers to call the theory of hereditary transmission of somatic acquisitions by another name—"the fixing of adaptations." Thus he addressed the Washington Academy of Science on January 14, 1930: "Every organic unit is plastic or impressionable, and reactive or accommodable. Use and disuse of parts or the whole, and environmental agencies, cause alterations that, if the causes persist long enough, will pass from temporary to habitual and eventually to permanent changes that will be inheritable." (*Science,* Feb. 28, 1930, p. 231.)

Neo-Lamarckians

4. The following contributors to a symposium entitled *Creation by Evolution* (edited by Frances Mason, Macmillan, 1928) adhere to Lamarckism in the sense of an unlimited progression wherein changes effected in one generation are handed on to the subsequent progeny. They are:

David Starr Jordan defining Irritability (p. 5). Defining Evolution as "Modification of traits from generation to generation through internal and external factors" (p. 6).

J. Arthur Thomson, ". . . old structures become transformed into things very new," etc. (p. 17).

Ernest W. McBride describing his experiments on Salamanders (p. 53).

Francis C. Bather a geologist who declares that the record of the rocks catches evolution in the act (p. 110).

Sir A. S. Woodward delineating the "progression" of forms as they appeared on earth, speaks of new organs evolving as the result of needs and use (p. 126).

Edward B. Poulton writes on the vestigial wings of moths and butterflies, likewise of mimicry on the part of insects—all in a Lamarckian trend of thought (pp. 174-185).

Sir A. E. Shipley does the same with respect to the bee (pp. 186-209).

Wm. M. Wheeler proffering much data on the habits and morphology of ants and their evolution as due to response to environments which led to highly specialized habits in a Lamarckian sense, lowers himself to innuendoes and silly grievances against Divine Providence.

Fred B. Loomis on the evolution of the horse and the elephant.

Wm. K. Gregory tells of the "early stages of life" in a Van Loon manner—the ultimate causes of it all may be as mysterious as you like, but it is now a matter of record that men were once fish (p. 275).

Julian S. Huxley conforms orthogenetically in such statements as these: "The original type was primitive but plastic; it was capable of being altered in many ways. . . . Such improvement is best termed 'specialization,' and the complete set of divergent specializations which characterize the evolution of the whole group, such as the mammals, is called the 'adaptive radiation' of the group. Biological specialization moves always in one direction only and is achieved at the expense of improvement in other directions. What is more, specialization in improving the efficiency of the physical tool, such as an eye or a limb, is bound sooner or later to reach a limit" (pp. 329-330).

It should be noted that these "neo-Lamarckians" do not use Lamarckian terms—"Use and disuse" etc., nor do they at all times explicitly expound the hypothesis. Their generalizations, however, in assigning evolutionary causes to the ubiquitous analogical and homological effects or "data" which demands, as they say, none other than a transformistic explanation, justifies a further generalization on my part—the assignment of the contributors

to the volume *Creation by Evolution* to the ranks of the anthropological evolutionists.

The theory of evolution has been and still is an aprioristic assumption notwithstanding the perfervid cries of " overwhelming evidence," " Indisputable proofs," and the innuendoes about beclouded mentality hurled at fixists by " scholars " who cannot, for the life of them, approach this subject dispassionately. There is, however, an unexpected exception. I refer to Charles Darwin—who did not take sides precipitately or in advance of what he regarded later as superabundant evidence for his theory of descent. It is well known, for instance, that he did not at first endorse the views of his gradfather, Erasmus Darwin. Furthermore, when he set out on the voyage on board the Beagle he was a firm believer in fixism. It was not so much the observations that he had made abroad but his interpretation of them that initiated his *Origin of Species*. The same observations may just as well have suggested " fixity " of species to his mind. Indeed, the slow and minute changes of organic forms in successive strata might have at first sight pointed to a common ancestry; but, then, the widely diverse types of flora and fauna on islands and on the adjacent mainlands could have just as well initiated speculation on an entirely different tangent. What, then, prompted his theory of Natural Selection? It is safe to say that it was his preoccupation with the theory of Malthus—that a population increases in a geometric progression (in a sequence of 2, 4, 8, 16, 32 etc.) whereas the food supply follows an arithmetical progression (2, 4, 6, 8, 10, etc.). Malthus had concluded that in time the population would by far exceed the food supply. Conflict would ensue, the weaker elements succumbing to sickness, vice, combat and death before their normally allotted time. Darwin adopted this idea and gave it a universally biological significance.

Views of Charles Darwin

Every evolutionary hypothesis invariably contains two things: an attempt to define and interpret the " *modes* " of speciation and an investigation into the nature of the *cause or causes* that gave the evolutionary process its inception and which may still be concomitant with it.

Darwin began with the assumption that variations are always passed on to offspring. He was aware of the fact that variations were, in a sense, the most invariable things in nature. He had

observed that each generation differs, however slightly, in some respects from its ancestors. Whether or not these physiological and morphological changes were readily perceptible, whether they were beneficial or detrimental to their possessors, did not matter so far as their prevalence was concerned. They simply had occurred throughout the ages and were still appearing vigorously. Now, the aggregate of modifications retained by one group of individuals as distinct from dissimilar variations constant in any other group, are sufficient to set that group apart as a new species. Nature, he observed was gifted with astounding fecundity. The available food supply, however, was inadequate for the multitude of individuals in search of it. Nature, on that acount employed the method of competition for the elimination of the unfit. The fittest variations on the fittest individuals survived. Four catchwords have been given to Darwin's ideas concerning the origin of species: "Fortuitous variability," "Natural Selection," "Struggle for Existence," and "Survival of the Fittest."

Darwin definitely committed himself to the belief that the efficient cause of variations was the internal tendency to vary. The mode by which the change from species to species took place, was the elimination through struggle and the transmission of variations, single or accumulated, to the offspring. Darwinists, of course, do not expect this process to give rise to single individuals or even a single pair of organisms wholly distinct from all their fellows, but suppose that parallel variations may simultaneously appear in masses of individuals.

In the first edition of the *Origin of Species* Darwin ascribed the inauguration of the evolutionary process to the Creator of all things. Later in life he veered into agnosticism. "But then arises the doubt," he wrote, "can the mind of man, which has, as I fully believe, been developed from a mind as low as that possessed by the lowest animals, be trusted when it draws such grand conclusions? I cannot pretend to throw the least light on such abstruse problems. The mystery of the beginnings of all things is insoluble by us; and I, for one, must be content to remain an Agnostic." (*The Life and Letters of Charles Darwin,* edited by his son, Charles Darwin, London, 1887, I, p. 282.)

Throughout his life Darwin engaged in a long series of deductions. He was not, however, fitted out by nature with that intellectual acumen, impartial attitude and breadth of outlook so

Limitations of Darwin

necessary for scientific scholarship. It is rather pathetic that he himself had to admit from time to time that the desired evidence for his theory was not forthcoming. He wrote to Bentham that "the belief in natural selection must at present (1863) be grounded entirely on general considerations. . . . When we descend to details, we can prove that no one species has changed (i. e., we cannot prove that a single species has changed); nor can we prove that the supposed changes are beneficial, which is the groundwork of the theory." (*Life and Letters,* . . . II, p. 210.)

So much, then, for Darwinism as it was understood up to the time that *The Descent of Man* appeared. Precisely what did Darwin teach in regard to Man's origin? (There is no need of evading this issue as some commentators have tried to do!) Darwin taught that man had a simian ancestry,—that man was the improved progeny of the ape. A few excerpts from the book of Darwin will settle that matter as far as this survey is concerned.

> In forming a judgment on this head with reference to man, we must glance at the classification of the Simiadae. This family is divided by almost all naturalists into the Catarrhine group, or Old World monkeys, . . . and into the Platyrhine group or the New World monkeys. . . . Now man unquestionably belongs in his dentition, in the structure of his nostrils, and in some other respects, to the Catarrhine or Old World division; . . . There can, consequently, hardly be a doubt that man is an offshoot from the Old World Simian stem. . . . (*The Descent of Man,* 1871, I, p. 205.)
>
> The early progenitors of man must have been once covered with hair, both sexes having beards; their ears were probably pointed, and capable of movement; and their bodies were provided with a tail, having the proper muscles. . . . The foot was then prehensile, judging from the condition of the great toe in the foetus; and our progenitors, no doubt, were arboreal in their habits, and frequented some warm, forest-clad land. (*Ibid.,* p. 214.)

No amount of wishing that it were otherwise and no attempt to "pass the buck" on to Huxley and Haeckel will ever eliminate the obvious meaning of those words.

Darwinism of Today

Representative Darwinists

Darwinism, as propounded by Darwin, has sponsors today. Some of them are sincere in their adherence; some others are outright fulsome in their praise of the theory. Two brief quotations from representative Darwinists will suffice. Thus Julian Huxley wrote:

> As regards the fact of evolution, every year since the publication of Darwin's great book has strengthened the evidence until now that there can be no doubt whatever of the evidence of an evolutionary process in life; evolution is a fact . . . most of them (biologists) strongly hold that natural selection is, as Darwin himself put it, the most important agent in producing the changes of animals and plants which we sum up under the term evolution. (*New York Times Magazine*, March 1, 1931, p. 8.)

Sir Arthur Keith, as President of the British Association for the Advancement of Science delivered an address in which he declared that Darwin's position was impregnable. Why? "It is because of what has happened since his death in 1882," declared Sir Arthur, and then he added: "Since then we have succeeded in tracing man by means of his fossil remains etc. . . ."

Thomas Huxley (1825-1895). The popularity of Darwinism is due, in large measure, to the organized propaganda of Thomas Huxley, self-styled "Darwin's Bull-dog." But conversely, Huxley is also indebted to Darwin. It is highly improbable, for instance, that Huxley's *Evolution and Ethics* would have appeared at all were it not for the impetus, or rather the inception which it received from *The Origin of Species*. Now despite the alleged defense of Suarez against Mivart, Huxley was by no means a champion of orthodoxy. Indeed, the temper of the times ran high. Huxley, a neurotic,[5] was in the very center of the storm. Whatever his antecedents may have been, the bitterness of some of his writings and the intense dislike for "orthodox" religion, was wholly uncalled for. The man who petulantly called the Catholic Church "that vigorous and consistent enemy of the highest intellectual, moral and social life of mankind" deserves nothing short of scientific obliteration and social ostracism in this world, and we hope that God has been merciful to him in the other.

Neo-Darwinists

Other ardent Darwinists and neo-Darwinists (those who lay greater stress on the orthogenetic trend in variation in contradistinction to the more or less fortuitous nature of the early Darwinian variability) are: *Amadeus Grabau* (neo-Darwinian; formerly professor of paleontology at Columbia University, gives a detailed account of

[5] At about the age of 13 or 14 he had witnessed an autopsy performed by a brother-in-law, who was a physician. Huxley suffered a severe psychic shock. Believing that he had been poisoned, hypochrondriacal dyspepsia took hold of him for life.

the neo-Darwinian position in *Natural History,* XX, No. 1—Jan-Feb., 1920).

Alpheus Hyatt (1838-1902) (was a Darwinian who concluded from extensive paleontological work that variation was controlled along definite lines or directions).

Canon Dordolot—will be mentioned later.

Theodore Eimer—a zoologist at Tübingen—adopted the term "orthogenesis" for the definiteness of variations *in a few directions.*

As a corollary to Natural Selection Darwin asserted that the appearance of secondary sexual characters could be explained historically, i. e., that they had their origin as the result of a "need" on the part of the male for attracting the female of the species. This hypothesis met with considerably more opposition than the theory of natural selection itself. Even Alfred Russell Wallace, the co-formulator with Darwin of the latter theory, refused to sponsor the notion that sexual differentiations, aside of the physiological differences, depended on the choosing of the more attractive male by the female. Scarcely anyone of importance takes notice of this aspect of Darwinism. Marked differences between the sexes are, today, taken for granted,—they just "are." Such secondary characters are merely the expression of sexual maturity. They are the result of the complex mechanism of the endocrine glands which are for the most part dissociated from the reproductive tracts. Moreover, everyone is aware of the sociological factors attending human courtship—psychic qualities of the mate-to-be, wealth and social standing very often determining the choice of either or both sexes in preference to physical attractiveness.

Opponents of Darwin

Darwinism, pure and simple, has dozens of opponents. To begin with, the action of the French Academy is pertinent. It excluded Darwin from its membership up to the year 1878, and when it finally did admit him relegated him to the Botanical section. In a letter to *Les Mondes* a member of the Academy gives this explanation: "What has closed the doors of the Academy to Mr. Darwin is that the science of those of his books which have made his chief title to fame—the *Origin of Species* and still more the *Descent of Man*—is not science, but a mass of assertions and absolutely gratuitous hypotheses, often evidently fallacious." (Quoted by Louis T.

More, *Op. cit.*, p. 196.) Louis T. More adds: " . . . time is slowly justifying this opinion," and it is evident " that ultimately Darwin's reputation will rest on his botanical work rather than on his hypotheses of natural selection and pangenesis; the value of the former is already fading and the latter is totally discredited." (*Ibid.*)

James Francis Abbott, of Washington University lists " but a few " of the objections to Darwinism as a theory of evolution:

(1) The basis of elimination or preservation is the usefulness of the organ whose variations serve as the criterion for selection, but there are thousands of very stable characters which must be of wholly indifferent value to the organism. One of the largest groups of the ground-beetles is divided into two sub-groups containing hundreds of species by the invariable distinction of the possession of one microscopic hair above the eye or of two.

(2) Again, while it may be recognized that the emphasis on a certain structure may be, so to speak, of selection value, yet the minute differences of fluctuating variations can hardly count one way or the other. Thus one author calls attention to the polar bear, whose white coat must be of great utility to him in stealing upon his prey unobserved. Without doubt, this species has evolved from a type of the more usual coloration, but " did the fortuitous appearance in his coat of a spot of white hairs as large as a dollar or a pancake give some ancient brown bear such an advantage in the struggle for existence as to make him or her the forerunner of the new and better-adapted sort of bear? " Darwin recognized this difficulty, but thought that the struggle for existence was so keen that the slightest difference, however slight, might decide between survival and extermination.

(3) Allowing for the fact that certain small variations are advantageous to their possessors, and granting that of the hosts of individuals born into existence, but a minute fraction can hope to survive, yet in many cases chance must play a larger part in their extermination than the possession of any kind of morphological or physiological character whatever.

(4) Most significant of all, perhaps, is the experimental demonstration that artificial (and by inference, natural) selection has narrow limits. Beyond a certain point the pull of the mysterious factor of regression prevents any further progress in that direction.[6]

In its very setting Darwin's theory of Natural Selection is confronted with an insoluble problem. " Competition " and " survival of the fittest," those essential features of the theory, must

[6] *General Zoology,* Macmillan, 1918, pp. 319-320.

An Insoluble Problem

mean one of two things. Either they are active agents in furthering the *perpetuation* of somatic acquirements or they are active agents in effecting *progressive changes* away from the original type. From the first supposition it must inexorably follow that natural selection *does not create,* does not produce any new variation. In that sense it assuredly does not explain the origin of any species but is inherently restrictive. At best, then, natural selection preserves a new adaptation, nothing more. The operation of other forces, however, be they further germinal upsets in the mutated organism or repeated and increased somatic adaptations affecting the germ plasm as well as the soma, would be necessarily in order, were natural selection understood in the second sense. It is explained in that manner by several investigators, but it is most certainly no longer Darwinism. From no less an authority than Thomas H. Morgan do we obtain the statement that genetic evidence does not warrant the last meaning attached to the term:

> Are we justified in concluding that these postulated changes in the gene are random changes on the ground that the end-products they produce seem to be in all directions or at random . . . ? Such an inference would be a mistake, . . . because the constructive processes in the gene, . . . are dependent in the last analysis on the physico-chemical constitution of the gene itself . . . the building up of new genes would not be random at all, however, random it may occur, but would be restricted by the composition of the original gene from which the new gene has come. . . . If we had the complete ancestry of any one animal or plant living today, we should expect to find a series of forms, differing at each step by a single mutant change in one or another of the genes, and each a better-adapted, or differently-adapted form from the preceding one. However, such a conclusion is unwarranted since the evidence in hand concerning mutations, inadequate though it be, seems that the progressive steps occur now in one gene, now in that.[7]

Although he repeatedly ejaculated his acts of faith in evolution in such terms as: Evolution " . . . is evident enough . . . inevitably follows . . . new species have arisen on the earth. This is proved by the paleontological record. . . . Though our faith in evolution stands unshaken . . . etc.," William Bateson has no word of commendation to say for Darwinism. Thus in that celebrated address " Evolutionary Faith and Modern Doubts " delivered on December 28, 1921 (*Science,* Jan. 20, 1922), Bateson declared that: " The

[7] *Op. cit.,* pp. 58-59.

claims of natural selection as the chief factor in the determination of species have consequently been discredited."

When one has witnessed the futile endeavors of scientists to formulate an argument from the "cumulative evidence" for evolution he is tempted to ask "Who is on the lunatic fringe now?" For, often enough, in the estimation of one evolutionist the argument adduced by another evolutionist is evaluated as no argument at all. This fact, I hope, has been brought out in this survey. Applying the wisdom embodied in that old saw,—no chain is stronger than its weakest link—we may say that the chain of evolutionary arguments is no evidence but plain conjecture.

The Array of Fossils

It is difficult to say in which of the two vast fields of investigation—paleontology or genetics—most of the evolutionary research is going on. I venture to say that the efforts expended for each are about equally divided.

Most paleontologists agree in their use of the names assigned to the geological eras and periods by the science of stratigraphy. For clarity's sake it might be well for us to keep in mind some of the nomenclature of the geologist. Thus the following names are usually attached to the periods in which primate and human fossils have been found. This outline of the eras and periods should be read from the bottom up. The names enclosed in parentheses are equally applicable.

II.	Secondary (Mezozoic)
	Cretaceous—both upper and lower
	Jurassic — " " " "
	Triassic — " " " "
I.	Primary (Paleozoic)
	Permian
	Carboniferous
	Devonian
	Silurian
	Ordovician
	Cambrian
—	Archaean (Proterozoic)
	Pre-Cambrian and Laurentian
—	Eozoic.

Instances of "pro-apes," "pro-humans" (the so-called anthropoids and pithecoids), have been assigned by evolutionists to more or less indefinite periods of the Tertiary and the Quaternary Eras. The "ape" and the "ape-men" as well as the "dawn-men" have been allocated in some of the lowest strata of the Tertiary Era. Thus continuing the table we have these names attaching to the eras of the Quaternary and Tertiary:

III. Cenozoic (comprises both the Quaternary and Tertiary Eras)		
1. Quaternary		
Pleistocene		
Recent		
Neolithic (non-metallic implements)		
Paleolithic		
	(*Stone Cultures*)	(*Fossils*)
	Azilian	Grenelle type
	Magdalenean, Solutrean	Cro-Magnon type
	Aurignacian	Grimaldi type
	Cold Mousterian	Neanderthal type
	Warm Mousterian	" "
	Cold Acheulean	" "
	Warm Acheulean	Krapina type
	Late Chellean	
	Chellean	
	Early Chellean	Heidelberg Man
	Cromerian	
2. Tertiary		
Pliocene		
	Foxhallian	Piltdown (?)
Miocene		
Oligocene		
Eocene		

The Paleontological Viewpoint

No two geologists can be said to agree on the computation of the earth's age. Nevertheless, we find anthropologists with a minimum of geological knowledge stating that the earth is so many million years old. Julian Huxley's " before 1,500,000,000 years " is an example of haphazard guessing. It is not so much the trained geologist who demands that we give credence to exorbitant figures as it is the anthropologist. Keith, for instance, insists that no less than 350,000 years have elapsed since the interment of the La Chapelle Man, whereas Sollas, an expert geologist is content with a computation of approximately 25,000 years. Other estimates of the earth's age are made all the way from Kovarick's 825-986,000,000 years, to Kelvin's 100,000,000 years (which he swelled to 400,000,000 when the conservative 100,000,000 met with sundry objections on the part of anthropologists), to Chester A. Reed's approximate 60,000,000 years. It is much less possible to find paleontologists in accord on the more intimate problem of the Age of Man. Calculations have run the gamut of years from 1,250,000 (Osborn) to 30,000 (Obermaier), to at least 15-19,000 years (Richarz), to the very date set by Archbishop Ussher, namely, October 24th, 4004 B. C.

The Earth's Age—Disagreeing Views

When we find two vast camps of geologists almost irreconcilably devided on quite a number of problems of basic importance (concerning the very origin of things), it seems foolhardy for the anthropologist to speak in terms of years. Co-operation with a geologist in estimating the age of a fossil will not do. The computation will always bear the stamp of the theory—either nebular or planetesimal—to which the geologist adheres. The sponsors of these theories or hypotheses are at loggerheads on these points: Internal heat, Porosity, Primitive surfaces, Shrinkage, Volcanism, Ancient Climates, Length of Geologic Time, the Origin (Manner and Time) of Life on Earth.

There are very specific objections to the tenets of some anthropological paleontologists. Upon examination, the theories and interpretations very often given to a particular " find " (bone or artefact) are discerned by the impartial investigator as so many forced confirmations of previously advanced hypotheses.

Let us ask ourselves a cold-blooded question: " How evident is

evolution from the viewpoint of Paleontology, in the sense of possessing data from the geological strata? And then let us hear what the critics have said in the matter.

Louis T. More: "It is quite safe to say that today in spite of an immensely increased collection of fossils, the positive evidence of geology, considering the vastness and intricacy of the problem of evolution, is as incomplete as it was in the time of Darwin and Huxley." (*Op. cit.,* p. 118.)

"It is, perhaps, an odd fact that the ancestors of animals are presented to us by the evolutionists as other animals well fitted to thrive in their environment and adapted to enjoy life; only in the case of man, do we get the picture of inefficiency, half-man, half-monkey, which is indecent and degraded." (*Ibid.,* p. 120.)

Uniformatarian Hypotheses

Since the time of Lyell geologists have been following the so-called "uniformatarian hypotheses" according to which, the chemical and physical actions of today are assumed to be a criterion for calculating similar changes in the past. It must be rather disconcerting to evolutionists when they are reminded that Huxley (Thomas), that arch-defender of Darwinism, reasons as follows: "Standard writers on paleontology take it for granted, that deposits containing similar organic remains are synchronous, at any rate in a broad sense. . . . Sir Henry De La Beche (*Researches in Theoretical Geology*) adduces conclusive evidence to show that the different parts of one and the same stratum, having a similar composition throughout, containing the same organic remains, and having similar beds above and below it, may yet differ to any conceivable extent in age. . . . All that geology can prove IS LOCAL ORDER OF SUCCESSION. It is mathematically certain, that, in any given vertical linear section of an undisturbed series of sedimentary deposits, the bed that lies lowest is the oldest. . . . For anything that geology and paleontology is able to show to the contrary, a Devonian fauna and flora in the British Islands may have been contemporaneous with Silurian life in North America, and with the Carboniferous fauna and flora in Africa." (*Discourses: Biological and Geological Essays.*)

Sir Bertram Windle: shows the inadequacy of computing geological age from the amount of river erosion, for "unless we are quite certain that the annual amount of detritus carried away is a constant quantity, our calculations may be wholly incorrect.

But, it may be argued, it is easy to take an average over a number of years. This might be possible if we had some thousands of years' records on which to work instead of fifty or sixty at the most. Even then it would not give us an absolutely accurate esti- about the early years of man. He expresses his appreciation of the mate, for we should still be uncertain whether the conditions in earlier ages had not been wholly different from those of the time during which observations had been made. In the immediate post-glacial period, for example, when enormous glaciers were in the process of melting, immense volumes of water must have poured through the watercourses with correspondingly increased denudation and removal of detritus." [8]

Queries of Sir Bertram Windle

The same author (*Op. cit.*, pp. 208-219) has formulated four most significant queries that must be answered without hesitancy by the paleontologist before a reasonable assent should be given to his statements. This matter is particularly apposite to anthropological evolution. Sir Bertram asks:

1. Are the objects in question human or of human manufacture?

(In some cases of fossilized bones—whole skeletons, etc., there is obviously little difficulty in determining whether they are human or not, but there are several instances of crania, teeth, etc., which have aroused no end of discussion. When bones are found scattered about a cave or are found in the same river bed but at a distance of several yards apart, it will always remain more or less doubtful whether they belong to the same individual.)

2. If it is agreed that the objects are human or of human manufacture, what is their stratigraphical position?

3. Are the skeletal (and perhaps also other) remains in their natural position, or is their disposition artificial?

(It has frequently happened that fossils discovered by workmen have been accidently disturbed to such an extent that the expert is quite unable to form an opinion regarding the strata in which the bones or artefacts had until then reposed.)

4. Is the collocation of objects significant or not?

(In other words, are we able to set up a critical study that should enable us to form at least a probable opinion—not conjecture—as

[8] *The Church and Science*, p. 259.

to the nature of the human being to whom the bones or implements are ascribed?)

View of Father Richarz

Father Richarz, S.V.D. (*Eccl. Review,* May, 1933), on the other hand, is quite confident that much will yet be found out work carried on by the French geologists, among them several priests—Abbé Breuil, Fr. Teilhard de Chardin, S.J. (who is known far and wide for his studies of Sinanthropus). Speaking of the numerous caves that have been explored (in France) Fr. Richarz says: "by such investigations a system of prehistory has been solidly established and the presence of man has been traced back into glacial time, which is also called the Pleistocene or Quaternary." (p. 488.) In the same article he chides those who contend that the remnants of early men are not so numerous. There are skeletal remains, he tells us, of no less than 70 of the Neanderthal race, but almost immediately adds that many of these seventy "individuals" are in a fragmentary condition (skulls, jawbones, teeth and limbs).

Testimony of M. Tildesley

In this connection there is a wealth of sane advice contained in an article "Bones and the Excavator" in *Man,* June, 1931, written by Miss M. Tildesley, of the Royal College of Surgeons' Museum, London. These few excerpts from the article contain scientific criteria which are seldom, if ever, applied by the majority of paleontologists. "Single specimens," says Miss Tildesley, "are of value only as a help to build up a series." The series should consist of "not less than fifty to a hundred specimens of one kind (e. g., crania of the same sex, neither immature nor senile)." With her tongue in her cheek she further observes: "When the series is about 100 the anthropometrist feels he is on fairly sure grounds if his specimens have not been picked out in any way, but are likely to be quite 'an average lot'; though, of course, he is still happier in founding his conclusions on 400."

In the foregoing there was a word or two about the average age limit of the individual crania acceptable for the series. Years ago, however, Kollmann counselled anthropologists, particularly the homologists, to seek likeness not between the skulls of old apes and men but between the skulls of very young apes and children. The similarity of the very young ape skull to that of man, he argued, is so great that there must without doubt be a family relationship between the two.

FOSSILIZED REMAINS

Name	*Found*	*Place*	*By*	*Geol'al Age*	*Articles Found*
1. Propliopithecus Haeckeli		N'ern Africa		Oligocene	1 jaw.
2. Dryopithecus		Siwalik Beds, India	Barnum Brown	Miocene	3 jaws.
3. Pithecanthropus erectus	1891-1892	Trinil Java	Eugene Dubois	Upper Pleistocene	Skull cap, femur and 2 upupper molars.

Characterizations:

The teeth were about 3 meters distant from skull; femurs 15 meters away.

Osborn and Dietrich place it in the middle Pleistocene, and consider it distinctly pro-human but of a very primitive type—a case, perhaps of arrested development, possibly related to the Neanderthal stock surviving in the southern sub-tropical forests of Asia. (Bicentenary number of the *American Philosophical Society's Proceedings*, vol. LXVI, 1927.)

Dwight, Thomas: the thigh bone is "extremely human" but the skull is that of an "ape, higher than any now existing." (*Thoughts of a Catholic Anatomist*, p. 183.)

Kohlbrügge: "shows that a race existed nearer to man than that of the anthropoids."

Virchow: "femur resembles that of man, but the cranium seems to be more like that of an ape."

McGregor: considers the fossils to be those of a man.

Gieseler, Wilhelm (of Munich) thinks that the bones are human because the "eye-so kets are man-like rather than ape-like," although he admits that "the skull is so low that the doubts of some of his colleagues are easily accounted for." The thighbone is quite unlike that of a gibbon. This bone and that of the Rhodesian (Broken Hill Man) are so much like that of modern man that anatomists have doubted whether they really belong to the skulls with which they were found. The fact that two debatable skulls have been found with femurs to which they apparently do not belong suggests, says Dr. Gieseler, the possibility that there has been a tendency in the human race to evolve from the bottom up. (Cf. *Science*, Oct. 5, 1928, xii.)

The following scientists regard Pithecanthropus as an ape:

Schwalbe—lateral branch of the pithecoids
Alsberg — " " " " "
Klaatsch— " " " " "
Haacke
Hubrecht
Macnamara—"a true ape of giant size"
Hertwig, R.—"an anthropomorphic ape"
Wasmann
O'Toole

A. S. Woodward: "Better specimens are needed to determine exactly its relationships." (*Creation by Evolution*, p. 134.)

"That remarkable representative of primitive humanity" (Sir Arthur Keith, in a speech before the Brit. Assoc. for the Advancement of Science, August 31, 1927.)

Dr. Reed Moir, speaking before the Berlin Anthropological Society, declared that Pithecanthropus did not differ in any essentials (as regards the skull plate) from the various skulls associated with the Aurignacian type of man. (*Jour. of the Amer. Med. Assoc.*, April 22, 1922.)

A half dozen or more opinions could be culled for this survey, but they would all be to no purpose. By way of transition, however, we may take note of the somewhat similar conclusions reached by Sir Bertram Windle (*The Evol. Problem as it Stands Today*, p. 61) and Father Stephen Richarz, S.V.D. (writing in the *Amer. Eccles. Review*, May, 1933, p. 495). They are of the opinion that in some remote time in the geologic past, beings existed which possessed a physique intermediate between man and ape.

In the summer of 1932 three additional thigh bones were found at Trinil. They are said to present the same combination of humanlike features and marked deviations from the human type. Professor Dubois who had made the original discovery in 1892 was highly elated at the find and immediately hailed it as a confirmation of his original contention that it represented a race of "missing links" (*New York Times*, July 17, 1932). *The Solo Man-Javanthropus* of Oppenoorth which had been found about six miles from Trinil belongs to a much later date, said Dubois. He contends that it is unquestionably human.

Name	*Found*	*Place*	*By*	*Geol'al Age*	*Articles Found*
Homo-Heidelber-ensis	1907	Elsenz Valley Germany	Laborers	Mid-Pleistocent, or Early Quaternary	A jaw with all its teeth.

Comments:

Osborn gives its age at approximately 250,000 years.

"May be regarded as ancestral to Neanderthal man." (*Natural History*, XX, no. 3, p. 232.)

Hrdlicka—though primitive in some ways, the teeth are "unquestionably human." (*Skeletal Remains of Early Man*—Smithsonian Miscellaneous Collection, 83, p. 131.)

Woodward, A. S.: ". . . is ape-like in the downward and backward slope of the bony chin. In other respects, however, it is typically human, though it is unusually thick and heavy." (*Creation by Evolution*, p. 135.)

Kramberger has shown that the Heidelberg skull in many respects approximates the skull of the modern Eskimo. Fr. Eric Wasmann, S.J., concludes from this that the Heidelberg jaw belonged to a man of the Neanderthal type. (*Modern Biology and the Theory of Evolution*, p. 507.)

Name	*Found*	*Place*	*By*	*Geol'al Age*	*Articles Found*
H. Neanderthalensis (a)	1856	Near Hochdahl, Düsseldorf, Germany	Laborers	Pleistocene	Skull cap, Two femurs, Both humeri and ulnae, Right radius, Left pelvic bone, Part of right scapula, Five pieces of rib, Right clavicle.

Comment:

Since the bones were thrown out of the cave (60 feet from the base of the valley) they cannot be determined geologically,—the opinion of Virchow, Rauff, and Obermaier. (*Smithsonian Inst. Report*, 1906, p. 394.)

The bones are undoubtedly human, but there are several rather conflicting opinions concerning them:

Prof. Clemont of Bonn—"a Mongolian Cossack" shot in 1814.
L. Mayer —thought the same.
L. Carter Blake —the skull of an idiot.
Karl Vogt —idem.
J. Bernard Davis —the skull has been artificially deformed.
Pruner-Bey —the skull of an ancient Celt or German.
R. Wagner —the skull of an ancient Hollander.
Rudolph Virchow —primitive Frieslander.
G. Schwalbe in 1901 —genus of Anthropoidae.
in 1904 —changed it to a "human species," a "homo primigenius."

In the Public Library of Milwaukee, Wis., a cast of the Neanderthal skull was exhibited with the legend: "Chellean period (paleolithic) 250,000 years.

Thomas Huxley said that in no sense may these bones be attributed to any intermediate stage between man and the ape. (*Evidence as to Man's Place in Nature*, p. 253.)

Fr. Barry-O'Toole: "The skull is that of a low, perhaps degenerate type of humanity." (*Op. cit.*, p. 325.)

D. Schaffhausen: "In making this discovery we have not found the missing link." (*Der Neanderthaler Fund*, p. 49.)

Other Neanderthal Remains

Name	*Found*	*Place*	*By*	*Geol'al Age*	*Articles Found*
(Neanderthalensis II.)		Idem Feldhofer Grotte	Rautert-Klaatsch Koenen	Pleistocene Late Alluvial	Human skeleton without skull.

Comment:

It was found 50 cm. deep in loess which had been washed into the cave. There is no indication of age—Barry-O'Toole. (*Op. cit.*, p. 326.)

Name	*Found*	*Place*	*By*	*Geol'al Age*	*Articles Found*
Man of La Naulette	1866	Valley of Lesse, Belg.	Andre Dupont	Same as Neand. I.	Fossil of lower jaw (fragment).

Comment:

It was found among the remains of mammoths and rhinoceros.

MacCurdy: evidently kin of the Neanderthal man. (*Smithson. Inst. Report,* 1909, p. 572.)

Name	*Found*	*Place*	*By*	*Geol'al Age*	*Articles Found*
The Men of Spy	1886	Spy, Namur Belgium	Marcel de Puydt and M. Lohest	Fourth Glacial (Obermaier)	Two nearly complete skeletons, probably of a man and a woman.

Comment:

Fr. Richarz (*loc. cit.*, 491) says that they "differ considerably, one being typically Neanderthaloid, the other approaching much closer to modern man.

They were found amid bones of the rhinoceros, mammoth and the great bear.

Stone implements were found, indicating Mousterian industry.

The position of the bodies indicated burial by friends.

Thomas Dwight explained the peculiar formation of some of the bones which postulate a position only partially erect (bowed thighs and bent knees). It was a non-inheritable adaptation, he says, brought on by the constant posture which these Neanderthaloids assumed when stalking game. (*Thoughts of a Catholic Anatomist,* p. 168.)

Knight, Charles R., has reconstructed the type for the series of murals in the Amer. Mus. of Natural History. Some of the characteristics which he portrays are: ferocity, savage, half-brutish, low forehead, deep-set eyes.

Name	*Found*	*Place*	*By*	*Geol'al Age*	*Articles Found*
Men of Krapina	1899	Northern Croatia	Prof. Gorjanovic-Kramberg	Last Interglacial	Parts of 14 individuals; large number of teeth, 10-12 skulls in fragments etc.

Comment:

Show signs of having been burnt.

Are associated with artefacts of Mousterian period.

Bones of rhinoceros, bear and primitive in the vicinity.

In general, they possess the same characteristics as the men of Spy and the foregoing Neanderthaloids, but are of a more modern type.

Marked by short stature, strong muscular development.

Surrounded by stone implements.

Externally the crania are of a fairly large size but the brain capacity is

somewhat below the present average. (Hrdlicka, in the *Smithson. Inst. Report*, 1913, p. 531.)

Name	*Found*	*Place*	*By*	*Geol'al Age*	*Articles Found*
Le Moustier Man	1908	Le Moustier Valley of Vezere, France	Prof. O. Hauser	Fourth Glacial	Complete skull and other skeletal parts of a boy about 15 years of age.

Comment:

According to some anatomists the sex cannot be determined.
MacCurdy: the bones point unmistakably to the Neanderthal type (resembling the Krapina, Spy man etc.) or the so-called "homo primigenius."
Also rather stocky, robust, and "ape-like" characters are noticeable (curvature of radius and of the femur)—MacCurdy.
Evidence of belief in immortality manifested in the mode of burial (stone implements of the periods were buried with the youth).

Name	*Found*	*Place*	*By*	*Geol'al Age*	*Articles Found*
La Chapelle Man	1908	La Chappelle aux Saints, France	Abbes J. and A. Bouyssonie and L. Bardon	Middle Glacial	Almost complete human skeleton of a male.

Comment:

An old man.
Evidences of a solemn burial: flakes of quartz and flint, fragments of ochre, broken animal bones. Burial was made in a rectangular pit.
Fossils of the horse, reindeer and bison with it.

Name	*Found*	*Place*	*By*	*Geol'al Age*	*Articles Found*
Roman	1929	Quarry near Rome, Italy	Prof. Sergio Sergei	Ice age or between the last two Pleistoc.	Female skull.

Comment:

Similar to the Gibraltar skull (next);
Brain capacity of 1,200 cu. cm.;
Was found with bones of the ancient elephant, woolly rhinoceros and hippopotamus.

Name	*Found*	*Place*	*By*	*Geol'al Age*	*Articles Found*
Gibraltar	1848 (?)	Forbes Quarry at Gibraltar (?)	Lieut. Flint (?)		Skull without lower jaw.

Comment:

Almost universally regarded as Neanderthaloid.
Capacity of 1,100 cu. cm. (It is a skull of a female.)

Name	*Found*	*Place*	*By*	*Geol'al Age*	*Articles Found*
La Quina Woman	1911	La Quina, France	Dr. Henri Martin	Middle Glacial	Incomplete skeleton.

Comment:

Has been reconstructed by Dr. Martin.
Hrdlicka: "The most ancient skeletal remains of Man."
Prof. Knight: describes original as having possessed "gorilla-like muscles and squat ferocity"!

Name	*Found*	*Place*	*By*	*Geol'al Age*	*Articles Found*
Crimean	1924	Crimea Russia	Bontisch-Osmolovsky		Two skeletons.

Comment:

Were found in a cave; stone implements; with bones of prehistoric animals. (*Science*, Dec. 25, 1925, Suppl. x.)

Name	*Found*	*Place*	*By*	*Geol'al Age*	*Articles Found*
Mongolian	1924	Mongolia	Roy Chapman Andrews	?	?

Comment:

The report in *Science*, Dec. 25, 1925, merely states that the expedition of the American Museum had discovered "dune dwellers" who were men of the Neanderthal type.

Name	*Found*	*Place*	*By*	*Geol'al Age*	*Articles Found*
Paleanthrops Palestinesis	1925	Capharnaum	Francis Turville-Petrie	30,000 B.C. (Keith)	Skull.
Paleanthrops Galilaeae	1932	Mt. Carmel	T. McCown & Dorothy Garrod	Id.	A cemetery of Neanderthal Galileans.

Other Neanderthal Findings:

1909-1912: several skeletons at La Ferrassie, France—by Capitan and Peyrony.
1909: at Sarlat, France—a child's skull.
1880: Sipka Cave near Sternberg, Moravia—fragment of child's jaw.
1914: Lower jaw,—near Weimar, Germany.
1889: Lower jaw,—near Montseron, France.

PRE-NEANDERTHAL FOSSILS

Name	*Found*	*Place*	*By*	*Geol'al Age*	*Articles Found*
Cro-magnon man	1928	Vallee du Roc, Charante, France	?	Stone-age	Man, woman, and a youth. (found in a cave).
Rhodesian or Australopithecus	1921	Broken Hill Mine, South Africa	Miners		Human skull minus lower jaw.

Comment:

Was found 60 feet below the surface.
Animal bones were found with it, also very crude instruments such as knives and scrapers.
In 1925 *Dr. Hrdlicka* found two skeletons of the same type at *Tuangs.*
" in some features it is the most primitive one that has been found . . . many points of resemblance to (or even identity with) that of modern man."—Dr. Smith-Woodward (*Science*, Feb. 3, 1922, p. 129.).
Hrdlicka is at a loss to place it either taxonomically or chronologically. (*The Skeletal Remains of Early Man*, p. 131.)

Name	*Found*	*Place*	*By*	*Geol'al Age*	*Articles Found*
Oldoway Man (1)	1914	Tanganyika Territory	Dr. Hans Reck	Early Pleistoc.	Skeleton.
(2)	1 26	Great Rift Valley, East Africa	Dr. L. S. Leakey	12 to 15,000 years	Two skeletons.

Comment:

(1) Reck: One of the very oldest of all known fossils of humanity. According to a group of *Anthropologists at Munich*, however,
  a) the bones are not so intensely fossilized as those of the extinct animals found in the same stratum;
  b) Oldoway man was of the same racial type still found in some tribes of Northern Africa;
  c) the teeth of Oldoway man have been artificially filed—a custom still prevalent in Africa;
  d) soil which clung to the bones upon examination proved to contain ingredients other than those in which they (bones) had been embedded.

(2) —closely resemble the modern types: tall, and have long and larger heads.

Name	*Found*	*Place*	*By*	*Geol'al Age*	*Articles Found*
Eoanthropus Dawsoni	1911-1913	Piltdown Common, Sussex.	Charles Dawson	Lower Pleistoc.	Cranium, one ramus of the mandible, two lower molars.

Comment:

Father de Chardin has since found two canine teeth presumably belonging to this type.

Sir Arthur Keith: "simian rather than human lines." (*The Antiquity of Man*, p. 324.).

Fr. Barry-O'Toole: declares (*op. cit.*, p. 322) that there is an "obvious disparity or disproportion between the mismated cranium and mandible."

McGregor (Coumbia U.) likewise thinks that the jaw and the skull are misfits.

A. S. Woodward "reconstructed" the type in England; *McGregor* in this country. *Gerit Miller* of the U. S. Museum assigns a tooth to the upper jaw, which tooth Woodward had placed in the lower.

The bones were found within a radius of "several yards."

H. F. Osborn: assigns the "dawn-man" to a considerably lower geologic age than Pithecanthropus erectus. In other words, he says that it should be considered to be of the Lower Pleistocene age. (*Science*, Feb. 22, 1929.)

Name	*Found*	*Place*	*By*	*Geol'al Age*	*Articles Found*
Sinanthropus Pekinensis (1)	1903	Near Peking	Schlosser		
(2)	1926	" "	Zdansky		
(3)	1927 & 1928	" "	Davidson Black & Drs. Bohlin and C. Yang and W. Pei		Greater part of lower jaw, parts of calvaria and about 20 teeth.
Sinanthropus Pekinensis (4)	1929	Choukoutian near Peking	W. Pei	Beginning of Quarternary (Grabau)	Greater part of an adult skull.

Comment:

(1) Is above the Java 'ape-man' in brain capacity, but below the Neanderthal.

(2, 3, 4) according to Osborn, should be placed chronologically at the close of the Tertiary bordering on the beginning of the Quaternary Ages.

(4) Pere Deschardin—"about 4-500,000 years old."

(4) ". . . despite archaic structure of its lower facial region, Sinanthropus like Eoanthropus was a large-brained form, though unlike the latter the calvaria of Sinanthropus does not appear to be unduly thick." (*Science*, June 28, 1929, p. 675.)

(4) ". . . Sinanthropus was a large-brained form, probably having a cranial capacity falling well within the range of normal variation of the character in the modern genus Home."—Davidson Black. (*Ibid.*, p. 676.)

(4) G. Elliot Smith:

a) Approximately the same age as Pithecanthropus and Eoanthr.

b) The jaws and brain-case reveal features common to both of the aforementioned. The Pekin man provides a link between the two.

c) The skull was found in the very cave where the man lived and died.

d) The temporal region of the Peking skull is much more primitive than that of the Piltdown man, and reveals a striking resemblance to the condition that is normal to adult anthropoid apes.

e) As a result of this find we should not think that the problem of the original place of man's origin has been settled, etc.

(*Science*, July 25, 1930.)

Abbe Breuil studied about 2000 implements taken from the cave and came to the conclusion that Sinanthropus was a man. Remnants of charred wood, seared bones, hearth-sites, etc. were unearthed in March 1931.

The Place of Man's Origin

Quite a variety of opinions and theories exist relative to the habitat of the first man.

Various Opinions

Darwin: South Africa. In 1871 Darwin stated " . . . our progenitors, no doubt, were arboreal in their habits, and frequented some warm, forest-clad land." (*The Descent of Man*, p. 214—Collier Edit., 1905.) The " progenitors," it may be remarked, were " ape-men." He did not specify what kind of primate was supposed to have been the immediate ancestor of man.

Barrell, Joseph: Mongolia. In 1917, Joseph Barrell, the eminent geologist advocated the " semi-arid plateau theory." These are his reasons for assigning the cradle of the human race to Asia: Man's strong padded foot . . . relatively long leg and erect posture, are all distinct departures from an adaptation to life in the trees and tend, instead, to fit him for running and for tramping long distances; in short, for life on open plains where trees grow in patches along the stream courses, rather than in a dense forest . . . and where the climate was changing toward cooler and more arid conditions. . . . (" Present Status of the Problem of Human Ancestry "—an address by H. F. Osborn, April, 1928, before the Amer. Philosophical Soc.)

Osborn, H. F.: Central Asia. Prior to 1923 Prof. Osborn had championed the Lamarck-Darwinian hypothesis of common origin between the anthropoid apes and man. However, after an expedition through the desert of Gobi he addressed a gathering of geologists at Peking and tentatively designated Mongolia as the home of primitive man. The following is an excerpt from his address: " Mongolia was probably not a densely forested country—this is indicated by the animal remains found there in the earlier deposits. An alert race cannot develop in a forest—a forested country can never be a center of radiation for man. Nor can the higher type of man develop in a lowland river-bottom country with

plentiful food and luxuriant vegetation. It is upon the plateaus and relatively level uplands that life is most exacting and response to stimulus most beneficial. Mongolia has always been an upland country, through the Ages of Mammals and before. It was a region forested only in part. . . . In the uplands of Mongolia conditions of life were apparently ideal for the development of early man, and . . . we may have hopes of finding the remote ancestors of man in this section of the country (Tibet)."

MacCurdy, George Grant: Mesoptamia. Recent excavations (1928) outside of Bagdad by the British-American expedition (Oxford U. and the U. of Chicago), revealing industry typical of a most remote paleolithic period, postulate Iraq as the place of man's first home, according to Dr. MacCurdy.

Duncan, George S.: Central Asia. Addressing the Archaeological Institute of America and the College Art Association of America in December 1928, George S. Duncan, Prof. of Egyptiology and Assyriology at the American University (Washington, D. C.), enumerated nine reasons why leading men of science believe Central Asia was the original habitat of man:

1. The oldest human remains, not less than 500,000 B. C., were unearthed in Java, once a part of the mainland of Asia;
2. The oldest human teeth, late Pliocene of early Pleistocene Ages, were found in the vicinity of Peking;
3. Artifacts of not less than 150,000 years B. C., have been discovered by Roy Chapman Andrews in Mongolia;
4. Two anthropoids, the gibbon and the orang, belong to Asia;
5. This continent (Asia) is the home of the highest organic life;
6. Ancient sand-drifted ruins, not yet explored, suggest an ancient civilization;
7. Asia has been a dry land for some 20,000,000 years;
8. Its great size with the varying life conditions made it suitable for primitive man;
9. Asia is centrally located for migrations to all parts of the world.

Boaz, Dr. Franz: Between Italy and Java.

Keith, Sir Arthur: South Western Asia. By a process of elimination Sir Arthur assigns primitive man to South Western

Asia. Europe or Africa cannot be considered the cradle of the human race, he says, because the Cro-Magnon type which had migrated thither is Asiatic and not African in its characterization. Europe had until the migration been "occupied by a most primitive species of mankind—the Neanderthal species." (*New York Times Magazine,* Oct. 12, 1930.) He does not definitely locate the home of primitive man but surmises that it lay "between India and Egypt—most likely on or near the Persian plateau." (*Ibid.,* April 3, 1932.)

Husslein, Father: Asia (Armenia). In one of a series of lectures over WEW (October, 1929), Fr. Husslein identified the four rivers having their origin in Eden with the Tigris, Euphrates, Araxe and the Rion or Tsoroch. "With full scientific, historical and Scriptural warrant," he said, "we can now confidently say that the history of human society takes its beginning in Asia, and most probably in the northern part. The Bible there definitely points out Armenia."

Dart, Raymond A.: South Africa. Basing his assertion on the "finds" of the Tuangs fossils unearthed in the vicinity of Witwatersrand, Prof. Dart believes that a pre-human race existed in South Africa, thus confirming Darwin's belief that primitive man had his origin there. (*Natural History,* May-June, 1926.)

Hrdlicka, Dr. Ales: Southwestern Europe. He came to this conclusion after his expedition of 1925.

Emergent Evolution

Two philosophers, Lloyd C. Morgan and S. Alexander, and a considerably large and influential clientele,[9] have in recent years compiled a rather complicated philosophical explanation of the universal and orderly change observable in nature, and have called their synthesis "Emergent Evolution." The system has been variously designated by its adherents: "Evolutionary Naturalism" (Sellars); "Creative Synthesis" (Spaulding); "Emergent Vitalism" (Broad); "Organicism" (L. J. Henderson). They agree, more or less, on these fundamental tenets:

1. Evolution is caused wholly by intrinsic agents and not by any sort of intervention from without. In other words, all phenomena (chemical, physio-chemical, bio-chemical) are the result of latent

[9] H. C. Brown, Jennings, C. K. Ogden, Conger, G. H. Parker, etc.

powers in matter which have been brought to actuality by emergence.

2. The process of emergence is continuous in the sense of the appearance of something genuinely new, but discontinuous only in the sense of a generic cessation occurring from time to time. New forms, powers, species, organs are evolved for which there is no antecedent or promise.

3. According to Morgan, "it is beyond the wit of man to number the instances of emergents." The emergents, however, are concatenated in such wise that two "levels" or interests—the anthropological or anthropocentric and the anthropodoxic (social dependencies) are maintained.

4. The "God, as Directive Activity" of their system is not so much a substance as a process or series of processes. This brief statement of S. Alexander (*Space, Time, and Deity,* 1920, II, p. 430) will indicate the trend of his theodicy: "In the hierarchy of qualities the next higher quality to the highest attained is deity. God is the whole universe engaged in process toward the emergence of this new quality, and religion is the sentiment in us that we are drawn toward him, and caught in the movement of the world to a higher level of existence."

Emergent evolution, as far as religion is concerned, sounds, at present, like Spinoza all over again. Nevertheless, if followed out logically, it should lead whither all repudiation of causo-mechanistic theories ultimately end—into the heart of neo-scholasticism which holds among other things most worthwhile, that creation is an intelligently guided act. We may confidently hope that emergent evolution may in the meantime act as a *via media* between vitalism and crass mechanism.

Criticism

There is one feature of Emergent Evolution that has evoked criticism from the traditional evolutionists, namely, the more or less saltational character of the emergents. Phylogenies and also ontogenies, we are told, do not occur in *ictu oculi,* but are extraordinarily slow. Furthermore, it is said, the theory does not account for the almost unabated emergence of misfits—morons, idiots, parasites, sense regressions (congenital or acquired defects of sight, hearing, skin pigmentation, malformations etc.). This latter objection is applicable to any and

every theory of evolution, and is manifestly inexplicable to the evolutionist and fixist as well, in the event of a denial of the economy of divine grace, or more accurately, ignorance of its loss. Aside of these flaws in the system, there is yet another objection to Emergent Evolution, which objection may be directed against all evolutionary theories thus far proposed to explain the evolution of social factors. It is essentially this: No evidence has yet been adduced to prove that organisms have either suddenly or by so many intermediate stages progressed from non-gregarious or disassociative to consociative, biocoenetic stages or states of existence. Predatism, parasitism, and symbiotic forms are contemporaneous with the most primitive manifestations of life. In like manner where the sexes are differentiated there is evidence of reproduction, familial or communal life from the outset.

Weismannism and Evolution

August Weismann (1834-1914) has exerted an influence on evolutionism comparable to that of Darwin. Despite his opposition to every hitherto proposed explanation he was an avowed evolutionist. He is usually given credit for originating the Germ Plasm theory, although Owen in 1849, Galton in 1872, Jaeger in 1877, had already enunciated practically every notion that the theory contains. Darwin looked upon the non-appearance of variations as the phenomenon requiring explanation; Lamarck had regarded as causes of variation those internal (physiological) and external (environmental) factors acting upon the organism. In 1885, however, Weismann rejected these views, and although obliged to yield on some points, remained a non-conformist to the end. Acquired characters were not passed on from parent to progeny, he asserted; and having challenged his opponents to furnish proofs to the contrary, he stated his own views. At first they were almost entirely speculative but have since received partial confirmation in the laboratory. Weismannism may be briefly set forth here. It holds:

1. The causes of variations are inborn or intrinsic in the germ plasm.

2. Sexual reproduction or amphimixis—the commingling of two diverse strains of germ plasm—is a device for doubling the possible variations.

3. Every organism is composed of two highly differentiated substances—the somatoplasm and the germ plasm. The somatoplasm is not at all active in the processes of heredity but serves as a protective environment, supplies nourishment and acts as a vehicle for the latent germ plasm.

4. Every germ cell has two kinds of protoplasm—morphoplasm and idioplasm (in recent terminology morphoplasm is called the cytoplasm and the idioplasm is known as the nucleus or karyoplasm). Morphoplasm is not subject to change as far as inheritable variations are concerned, but the more complex idioplasm varies.

5. The idioplasm is composed of an infinite number of vital units called biophors. Biophors are the constituent parts of determinants which in turn compose the ids. Groups of ids form idants.

Weismann was fully aware of the ultramicroscopic dimensions which he thereby attributed to the biological units. "The biophors," he writes, "are not hypothetical units; they must exist, for the phenomenon of life must be connected with a material unit of some sort." (*Germ Plasm,* p. 44.)

6. The primitive biophors came into existence through "primordial generation (generatio aequivoca)." Biophors are not the equivalent of molecules but are groups of molecules. The individual biophor, determinant etc., is capable of multiplication.

According to more modern cytology, the determinants, the ids, the idants are the equivalents of the chromosomes, the genes, and the pro-genes and as such are the bearers of the constituent factors which call for specific characters and qualities in the somatoplasm as the development of the embryo proceeds.

7. The variablity of the determinants, ids and idants may arise from one or several of the following causes:

a) New molecular arrangements in the biophoric and ascending units;

b) Elimination of idioplasmic parts during the maturation process notably at meiosis (the stage wherein the homologous chromosomes segregate into groups of secondary spermatocytes or oöcyte and polar body as the sex may be);

c) Fusion of widely differentiated units in amphimixis;

d) The action of natural selection upon the units generally (continuance of some and elimination of other kinds of units).

In this manner Weismann attempted to account for speciation: A new species will appear when by constant modification of a sufficient number of determinants, the progeny will no longer approximate the original type from which its ancestors sprung.

Critique of the Theory

Weismann was primarily concerned with the vexatious problem of heredity and it was only at a later date (1892) that the theory was definitely extended to the province of evolution. At first he would not admit that the environment had the slightest influence upon the germ plasm, but he later made concessions.

The Germ Plasm Theory

The germ plasm theory, dealing with elements that were, and, to some degree, are still beyond the reach of the most highly-powered microscopes, has eluded the confirmation of sense experience. Nevertheless, there are several notions in it that are worth retaining, not so much as a method whereby "evolution" may be demonstrated or disproved, but as affording a working basis for the geneticist who is interested in the conundrum of inheritance or non-inheritance of somatic variations. The conservative geneticist, then, may agree with Weismann that:

1. In every organism there is found both germ plasm and somatoplasm.

2. Somatoplasm is composed of somatic substance which is peculiar to the individual organism and which has arisen from the germ plasm and dies with the individual.

3. The germ plasm has come from the parents and that it remains substantially distinct and undifferentiated in the progeny.

4. The germ plasm was perfect in the beginning; that it has undergone considerable modification throughout numerous generations as a result of amphimixis.

5. (With Weismann in his later years) that the germ plasm has been modified by climatic conditions, which admission offers a plausible explanation for the transmission of racial characters. (Weismann even allowed for the action of bacteria and toxins on the germ plasm.)

6. The germ plasm is a very complex substance; that it matters

little whether one calls them Determinants, Ids and Idants or Chromosomes, Genes and Pro-genes.

But there are notions in the theory to which serious objection may be made:

1. Weismann founded his doctrine on a purely materialistic basis. The biophors, the ultimate units of life, are material, nothing more or less. The acceptance of Weismannism, with and without its qualifications, is a remarkably strange occurrence in the history of biological investigation. Today, very many geneticists accept Weismann's views. Precisely why all of his assumptions should be accepted is difficult to say. Many of Weismann's assertions demand by far more credence than vitalism itself, and yet they are whole-heartedly endorsed by many who ridicule the mere suggestion of vitalistic phenomena.

Objections

2. He had assumed that "vital affinities" united the biophors into determinants, the determinants into ids, the ids into idants. The vitalist should not be deceived into thinking that because Abbott, Hegner, Haeckel, Ludwig, Spencer, Loeb, etc., have endorsed Weismannism they have forthwith converted to the vitalistic point of view. There is a vast difference between the "vital affinity" of Weismann and the "entelechy" of Driesch. Weismann's is solely a physical, a chemical relationship. The vitalist's "affinity" is the result of a teleological force, a purposive arrangement of whatever chemical constituents there may be in the protoplasm.

3. Weismann adapted Darwin's principle of natural selection. We have already considered the term "natural selection" and have tried to prove its efficiency as a mode of specific change.

4. To the germ plasm in the Weismannian sense is attributed a power not at all granted to the somatic tissue. Somatic cells are considered mere offshoots of the germ plasm, losing their power of growth and reproduction as the organism declines, whereas the germ plasm is, in a sense, immortal. However, every cytologist will insist that every cell possesses the power of self-perpetuation as manifested in the complicated process of indirect and direct cell division. Somatic cells divide and subdivide with as much regularity as any of the germ cells because they partake of the life of the organism no less than the germ track. Furthermore, a gamete

(a germ cell containing the haploid number of chromosomes) must fuse with a corresponding gamete from another organism before a zygote or unicellular life unit can begin its development. Millions of gametes stop short of this accomplishment and perish. The product then, of countless germ plasm ttissues possesses a rather inglorious immortality.

5. The entire history of buds, bulbs, cuttings, and also the appearance of androecia and gynecia on widely separate parts of the plant organism indicates the absence of any special germ track. In other words, germ cells may arise from almost all of the somatoplasm in the plant kingdom. An oversight of such magnitude on the part of Weismann gives one sufficient reason to doubt the vaunted efficacy of the theory as the explanation of things hereditary.

6. The discovery of the Golgi-apparatus or bodies (reticular and fibrillar substances closely resembling chromosomes and found in the cytoplasm) and the peculiar behavior at the time of maturation of the so-called "Keimbahn Determinants," should cause some uneasiness to the out and out Weismannian. The collaboration of the Golgi-bodies with the chromosomes in the processes of Karyokinesis suggests, at least, the possibility that the germ-plasm is not the sole vehicle of heredity.

7. When confronted with the problem of regeneration Weismann was compelled to modify his views about the isolation of the germ plasm. He compromised by saying that the somatic cells retained sufficient germ plasm to enable a restoration of amputated parts or even to produce new individuals.

8. Finally, the theory is open to question because of the facility with which it is distorted. It had undergone major changes even during the lifetime of its author. What could be more disconcerting to the sincere Weismannian than the variety and extreme lengths to which some of the theory's expositors have gone. In Menge's *General and Professional Biology* (p. 163) we read: "It means . . . that when we go back even twenty-five generations considering our two parents, four grandparents, eight great-grandparents, etc., we are related in actual (sic!) blood-relationship to more people than there are in the world at the present time . . . we are truly and actually our own ancestors in so far as the sex-cells

are concerned. . . . An actual living particle of every one of our forefathers is present in each one of us."

Now, in that passage, Menge is expatiating on a corollary of the theory, namely, the idea that morphologically the germ plasm is continuous, is passed on from generation to generation. Suffice it to say, Menge or any other Weismannian would be hard pressed were they called upon to reconcile that assertion with the fact that there is a ceaseless manufacture, secretion, and expulsion of the germ cells, in short, a constant metabolism within the germ plasm. One may readily agree with the statement that an individual arises from tissues that have come from the parents and that some of the molecular substance of the germ plasm of the proximate ancestors may yet remain in the physical makeup of the gametes; but that there are any molecular parts of the germ plasm of the remotest ancestors present in any present generation can be denied with equanimity. Mathematically, the molecules which went into the zygote which developed into the first child of the First Parents, may not be exhausted considering the vast number of molecules present in any zygote. However, they must be exhausted physically, if not through metabolism then at least through that Mendelian phenomenon,—the Free Assortment of Chromosomes at the time of Meiosis. Every geneticist knows full well how quickly chromosomes may be "lost," i. e., relegated to spermatids or to polar bodies which will not be functional in the process of zygosis.

The germ plasm theory is generally accepted by Catholic psychiatrists who are eager to disprove the claims of the eugenists. The evolutionary implications which Weismann and his followers most certainly held are entirely ignored.

Weismann has arrayed a formidable list of data to prove that acquired characters in any of the following three senses are not inherited by the offspring, namely:

a) Somatic induction—or the action of external factors on the soma and through the agency of the latter upon the germ plasm;

b) Parallel induction—or the action of the external factors simultaneously on the germ plasm and the somatoplasm;

Weismann's objections to the hypothesis of somatic inductions are as follows:

1. There is no known mechanism whereby somatic characters could possibly be transmitted. The germ cells remain independent

units not participating in the activities of the body but lie within the soma as parasites, or at any rate commensally. To the assertion that the secretions of the germ plasm are highly beneficial to the organism and in consequence cannot be regarded as parasitic, the Weismannian replies that the homones and chalones are not the product of the germ cells but of the interstitial cells or tissue of the gonads.

Objections to Theory of Somatic Inductions

2. The evidence that such a transfer actually takes place is looked upon by the Weismannian as wholly inconclusive and unsatisfactory.

Conversely Weismann lists conclusive evidence to the contrary:

a) The offspring of warriors are not born with scars which their fathers possessed;

b) Tatooing and circumcision practised throughout the ages, and

c) The mutilated feet of Chinese women, and

d) The progressive crippling of the little toe (incorrectly interpreted, said Weismann, as an acquired somatic abnormality transmitted to the child, but in reality a germioplasmic mutation) are not inheritable.

e) Likewise sheep and horses with docked tails and dogs with cropped ears never produce young having the same parental mutilations. Weismann's decaudization of 1592 mice is labelled as a document in the Zoologisches Institut at Freiburg to prove that taillessness was not passed on from generation to generation.

f) Trees deformed by the prevailing winds are not known to produce a modified progeny when the adverse environmental causes are removed. Similarly, the persistent sunburn of persons long resident in southern climes does not reappear for long when the tanned individuals return to the north where their progeny are to be reared.

g) The trained ear, the skilled hand and the strong arm are not inherited. This and several other instances (e. g., the "weakened germ plasm" of those addicted to drugs, alcohol, etc.) must be understood correctly. There are certain strains of germ plasm that undoubtedly carry with them the potentiality, the talent, the susceptibility, if you will, for the individuals receiving it to do great

Evidence to the Contrary

things or to readily succumb to undesirable habits. The environment, without doubt, has much to say in such cases, but all the available environment cannot supply "native ability" or talent should this be absent. But one may ask in the cant of the hour: "How did the germ plasm ever get that way?" Or, one might ask the Weismannians to give a convincing account for such structural abnormalities as brachydactylism, syndactylism, polydactylism and the two outstanding functional peculiarities—color-blindness and hemophilia. They will reply with Babcock and Clausen that chromosomal aberrations and factor mutations have occurred. In other words, at the unpairing of the homologous chromosomes at synapsis the separation may not have been clean-cut, a piece of chromosome adhering to its mate; or a fragment of chromosome may have been lost before syngamy (the fusion of the gametes); or at the reduction of the chromoses an irregular or unequal migration took place to the poles of the germ cells. Factor mutations, at the present moment beyond the pale of scientific explanation are supposed to be qualitative in character. (These sketchy observations concerning the nature of somatic variations will suffice. The final remarks about chromosomal aberrations are to some extent applicable to DeVriesism or the study of mutations.

Chromosomal Aberrations

DeVries thought that evolution could be thoroughly explained in terms of "sports," "saltations." He cautiously used the term "elementary species" when describing the numerous mutations found among the primroses with which he experimented. With that, we find ourselves back at one of the most debated problems of the nineteenth and twentieth centuries—"What is a species?" If sides must be taken, I prefer the traditional view of the matter. Accordingly, there will be a distinction between Organic Species and Systematic Species. The organic species would comprise the original objects of creation—those organisms which received their names from Adam, and the systematic species are those externally modified forms which have developed under diverse environments and which are like yet unlike the organic or natural species from which they have descended. And as criteria for each group we might apply Bateson's formula with Jordan's addition: "Morphological Continuity and Interspecific Sterility with Longevity or Viability." In other words, those organisms which are found to be morphologically alike among themselves

but wholly unlike other organisms in structure, and which, moreover, are fertile among themselves and sterile with others and which, moreover, produce viable and fertile offspring, are members of one species, viewed from either the organic or the specific aspect. When confronted with the problem of sterility found in hybrids, Congers suggests the possibility of eras in which the offspring of genera were invariably fertile although there are no instances of such at the present time.

I must confess that most of these genetical observations seem remote from the problem of Man in Evolution. It must be maintained, however, that behind all the fossils ever amassed, all the evidences of developed cultures, the major problems of the evolutionist or of the creationist are those presented by the application of genetical principles either retroactively or with a view to observing changes as they proceed round about us. Without a genetical background the study of evolutionism would be as shapeless and undecipherable as many of the fossils with which it is concerned. If you would appreciate bones and the reconstructions of extinct species or gradient value attached to them, become a geneticist!

Before concluding this part of the survey we may insert Dr. H. F. Osborn's theory of "aristogenesis." It may, for two reasons, be called an eclectic theory, chiefly, in the sense that Dr. Osborn believes the best in every race have furthered evolutionary progress and also in the method he has followed in choosing the best elements in the theories of evolution thus far proposed. Aristogenesis, then, is made up of these factors:

Factors in Aristogenesis

(1) The principle of progression, development of most useful mechanisms;

(2) The converse principle — retrogression, degeneration, of least useful mechanisms;

(3) Principle of compensation—gain of certain mechanisms compensated by loss of other parts;

(4) Principle of economy of mechanisms, related to the principle of compensation;

(5) Principle of mechanical adaptation through ontogenetic and phylogenetic acceleration;

(6) Principle of mechanical adaptation through ontogenetic and phylogenetic retardation;

(7) Principle of autoadaptation of the individual during ontogeny;

(8) Principle of coördination, correlation, coadaptation, of all the mechanical parts, ontogenetic and phylogenetic;

(9) Principle of organic selection of races which show the highest powers of coincident mechanical autoadaptation and hereditary mechanical adaptation;

(10) Principle of allometrons, or adaptive changes of proportion in all the hard parts of mammals;

(11) Principle of rectigradations, or adaptive origins versus fortuitous or random origins of new characters;

(12) Principle of potential heredity, predetermination or emergence of rectigradations.

Vestigial Organs

An exaggerated importance attributed to the minutiae of morphology has led a number of evolutionists engaged in the study of comparative anatomy to conclude that the presence of rudimentary organs in some animals and in man postulates the descent of such organisms and man from species in which those organs were perfect. Thus, teeth are found in the embryonic whale, semblances of legs are discerned in the peculiar outgrowths of the reptilian pelvic girdle; the mammae of the male mammal and the presence at times of more than two on the female of the species suggests descent from forms in which that number was functional. Wiedersheim has listed no less than 180 such vestigial organs in man alone. The argument has been generalized to such an extent and is so widely credited by evolutionists as an outstanding confirmation of their theory that to enumerate the "authorities" and their dicta would take incalculably long. Two arguments, on the other hand are usually brought forward by the discriminating anatomist. They emphasize the need of assigning correct interpretations to the facts in hand. They are:

1. There are indeed organs, for instance the appendix in man, for which our present knowledge does not offer an adequate explanation. The existence of apparently useless tissue, muscular, osteal or otherwise, does not warrant the claim that they are vestigial. The endocrine glands, at one time, were considered useless, rudimentary. Their paramount importance for the well-being of the organism has been ascertained only in very recent years.

2. The present state of atrophy and inferiority of said organs may be explained genetically—as being so many external manifestations of germinal upheavals or as having been brought about by disuse, change of environment, etc.

The Recapitulation Theory

There is one argument advanced by the evolutionist that has had the hardihood to survive and reappear despite the scotchings it has time and again received. I refer to Haeckel's Biogenetic Law or the Recapitulation theory.

Von Baer and Haeckel observed the similarity of embryonic forms or stages that are passed through by organisms commonly looked upon as being unrelated. They generalized this matter of likeness to the extent of saying that all animals during their embryonic development pass through the adult forms of all the phylla to which they at one time belonged; or as Haeckel tersely stated it: "Ontogeny recapitulates Phylogeny." Thus, similar appearances are supposed to be conclusive evidence of descent. Now, the tadpole indeed resembles the fish, but Haeckel insists that the tadpole bears this resemblance precisely because frogs had fish-like ancestors. The law, of course, according to its founder, is a universal thing. It includes man, for whom an appropriate genealogy was drawn up. At first it embraced 20 but was subsequently enlarged to 30 stages—from the moneron (non-nucleated "cytode" formed from the Bathybius Haeckeli), up to our present sapiential status.

Haeckel's Biogenetic Law

Now, this sort of belief is more widespread than we might at first imagine. It is taught in term after term in secular universities, colleges, and high schools. Dozens of text-books, symposia and monographs, too numerous to mention, appear every decade in which this celebrated "law" is reiterated. The fact that Haeckel has been shown to be an arch-designer of fraudulent embryological drawings and plates does not deter his admirers from perpetuating the hoax. Confer *Haeckel's Frauds and Forgeries* by Fathers Assmuth and Hull—Jesuits, Bombay Examier Press, 1915). Nonpartisan anatomists (e. g., Gray's famous *Anatomy* re-edited by Lewis) repeatedly label the three ridges or arches and the four clefts which appear on the embryonic human foetus (in the region of the head) as incipient mandibular (Meckel's cartilage), auricu-

Popularity of this Law

lar and styloid and hyoid structures, and yet the evolutionist distorts these growths into evidence for gills which the foetus is supposed to carry as reminiscences of its piscine forbears. Several other arguments against the Haeckelian assumption could readily be presented. Father Barry-O'Toole has dealt at length with the opinions for and against the biogenetic law in his thorough-going book—*The Case Against Evolution.* Let it suffice at this moment to say that even Haeckel was aware that the facts did not warrant his assumptions. The majority of stages through which the individuals of a species pass do not correspond to the hypothetical adult stages at all. Haeckel was obliged to further hypothecate two more notions, *viz.,* " palegenesis "—or the recapitulation of the stages corresponding to the actual evolution of the race, and " caenogenesis "—the collective name for the deviations or omissions occurring in ontogeny. " Caenogenesis," says its author, " should account for the falsifications or disturbed development which a tolerant nature permits under the compulsion of adapting embryongeny to altered circumstances." Haeckel was indeed unhappy in the choice of that word " falsify." The falsification was on the part of a prejudiced author, an artificer, of a so-called law and not at all on the part of Nature in dealing with her own laws.

The Theologian and Anthropological Evolution

We shall now consider the extent, if any, to which one may go in holding anthropological evolution. Broadly speaking there are two groups of Catholic theologians who have given their opinions in this matter. There are several latitudinarians who permit the belief that man may have evolved from the ape or from ape-like ancestors or from a common stock with the apes. There is another class of theologians who are out and out traditionalists who will not brook any such teaching. Without rehearsing the threadbare thesis that there can be no conflict between genuine science and religion, we shall briefly review some of the statements of both groups.

1. *Père Leroy, O.P.*—Leroy's theory, published in 1891 contained the following items:

1. Sacred Scripture does not oppose the idea of the evolution of the body.

Various Views

2. The Fathers cannot be approached for a conclusive teaching in this matter.

3. The decree of the Council of Cologne (1860) excluded the evolution of man only in the sense of a *spontanea immutatio.*

4. Scholastic philosophy offers an adequate solution of the problem, namely:

a) it is the *form* which determines matter;

b) the human body is made specifically human by the soul;

c) accordingly, having infused a created human soul into an animal organism, God could still be called the Creator of that human body. There would be no further need of Divine intervention.

> *The decree of the Council of Cologne reads thus: "Primi parentes a Deo immediate conditi sunt. Itaque Scripturae sanctae fideique plane adversantem illorum declaramus sententiam, qui asserere non verentur, spontanea naturae imperfectioris in perfectiorem continuo ultimoque humanam hanc immutatione hominem, si corpus quidem spectes prodiise."* (Tit. IV, c. 14.)

Père Leroy was cited before "competent authorities" in Rome and when the theory was judged to be untenable he forthwith retracted and withdrew the book from circulation.

In his book *Evolution and Theology* (p. 235), Fr. E. Messenger claims that in the case of Leroy there was no "official declaration" against his doctrine. The "superior orders," he argues, may have come solely from Leroy's Dominican superiors. Furthermore, Fr. Messenger contends, whatever tribunal passed judgment on Leroy's tenets, their decision affected only 'his' doctrine, namely, that *any* sort of Divine intervention in the formation of Adam's body was not required, save that of creating the human soul and its infusion into the animal organism. It would be wrong to infer, writes Fr. Messenger, that any and every doctrine of the evolution of the human body is also "untenable" (p. 237).

II. *Fr. J. A. Zahm*—Dr. Zahm's *Evolution and Dogma* appeared in 1897. In it he unhesitatingly declared that he saw no reasons why the doctrine of evolution could not be applied to man provided one holds to the doctrine that the human soul was created. He had previously made this statement at the Catholic Summer School (Cliffhaven, N. Y.), and had published an article of the same tenor in the New York *Freeman's Journal* for August

31, 1895. This book *Evolution and Dogma* immediately met with Rome's disapproval. It was hurriedly withdrawn from distribution.

III. *Canon H. Dordolot, D.D., D.Sc.*—In 1918 the Canon gave two lectures before the Faculty of the University of Louvain on "Darwinism and the Work of the Six Days" and "Darwinism in the Light of Tradition and Catholic Philosophy." These conferences form the basis of the Canon's Book: *Darwinism and Catholic Thought* (Benziger, 1922). The Canon was later invited to address the gathering at Cambridge University, England, for the centennial celebration of the birth of Charles Darwin and the fiftieth anniversary of the publication of the *Origin of Species.*

In all these years no outright official action has been taken against this somewhat startling departure from the commonly accepted attitude toward Darwinism in its several senses. True, in 1871,

IV. *Mivart,* far in advance of his time as a Catholic, had published *The Genesis of Species* in which he took issue with Darwinism, but at the same time proposed a theory of modified human evolution. Excluding the soul of man from his anthropological transformistic concepts, he suggested that there could be no objection to the proposal that the body of man might have evolved from lower organisms up to a status fit for the infusion of a rational soul. A storm of controversy ensued but no authoritative action was inaugurated against Mivart's views. As a matter of fact he was subsequently appointed Professor of Biology at the Catholic University of Kensington, and in 1876 received a Doctor's degree from Pope Pius IX.

There have, of course, been critics of the Canon's book, notably Father Barry-O'Toole (*op. cit.*) and the Jesuit Fathers Hornsby, Le Buffe and McClellan—as the indices of the *Ecclesiastical Review* and *America* will amply show. But there has been another effect which followed upon the appearance of *Darwinism and Catholic Thought,* namely, a tendency to advance similar views and a penchant for stressing the point that the Church has left the matter quite open to discussion. Thus, apart from the original arguments which he formulates,

V. *Dr. John A. O'Brien* of the Newman Foundation of the University of Illinois, seems to be motivated in taking a rather

liberal stand, by the persuasion that the Church has as yet not taken an official interest in the matter. With this in mind, I presume, he has contributed articles to several issues of *Our Sunday Visitor* in 1932 and one to the *Ecclesiastical Review,* Feb. 1931, and has, moreover, written a work entitled *Evolution and Religion* (The Century Co.). In the main, he is convinced that some scientists have proved evolution, generally speaking, to be indisputable, but he hastens to add that the scoffer, the aethist and agnostic received no consolation from that scientific belief. The bases of one's acceptance of revealed religion are not impaired when once he has sought and found in evolution a satisfactory explanation of the material universe. Father O'Brien is impatient with the blunder so often committed by the theologian who appeals to the Bible in refuting evolution, and by the scoffer as well who would by "proving" evolution endeavor to bring the Bible and Religion into disrepute.

VI. *Father Ernest Messenger,* whose work *Evolution and Theology* has stirred up considerable agitation in the periodicals on both sides of the Atlantic, states that the arguments for evolution are negative as far as Sacred Scripture is concerned. That is to say, the Bible holds forth for neither the fixist nor the transformist. In his interpretation of the Biblical Commission's (June 30, 1909) phrase—"peculiar creation of man," Fr. Messenger limits the meaning of the term "homo" to the soul alone. He suggests that the word "homo" is governed by the term "creatio" and therefore would refer to the human "soul" which alone was directly "created." Adam's body was "formed" from the pre-existing matter, and thus on any hypothesis could not be said to be directly "created." Messenger appeals to the subsequent wording of the decree which deals with the "formation of the first woman from the first man," and asks if *mulier* refers to Eve's body only. If it were to be understood in the sense of both body and soul that would indicate the origin of Eve's soul from Adam. Fr. Messenger cites Dom Laurent Jannssens, one time Secretary of the Pontifical Biblical Commission, as authority for the statement that the wording *peculiaris creatio hominis* was advisedly chosen so as not to hamper discussion or reprove those who adhered to the theory of the evolution of the human body.

Now, it has been variously maintained by reviewers of Fr. Messenger's book that the term *mulier* of the decree, means no less in

that place than it has always meant, but they insist that there is an important distinction between the two words *formatio* and *creatio*. For the sake of time and space and because I cannot improve on his passage, allow me to quote "Reviewer" from the *Ecclesiastical Review* for August, 1932, p. 187. He writes:

> (1) "Formatio" is appropriately predicated of something that has extension; "creatio" implies no such restriction.
>
> (2) The two phrases of the Commission's decree, "peculiaris creatio hominis" and "formatio primae mulieris ex primo homine" establish the respective norms of two passages in Genesis, of which the first records a twofold method of producing the first man's twofold nature, while the second explicitly records only the production of a body.
>
> (3) "Homo," not only in canonical sources, but in all human literature means just one thing, and that a composite being of matter and spirit; "creatio" is acknowledged in all Catholic sources as applicable either to first and strict creation or to production from existing material, and is therefore capable of designating both the operations recorded of the first man, whose "creation" (like his specific nature itself) was in fact "peculiar" on that very account.

Since I have attempted to present a cross-section of contemporary thought regarding the evolution of man and the several biological concepts which are inherently bound up with that problem, the opinions of several authors of Theological manuals should be inserted here to balance, as it were, the space allotted to the former. An acute analysis of their sustaining arguments would, of course, indefinitely prolong this paper. For that reason a mere recital of the theologians' "theses" will suffice.

VII. *Father Blasius Beraza, S.J.* (*Cursus Theologicus Oniensis:* Tractatus de Deo Creante, 1921, pp. 475-477), is unalterably opposed to anthropological transformism. His thesis is typical of several other writers. It reads:

> 1. *Hominem completum, sumptum scilicet corpus et animam, non ducere originem per evolutionem naturalem ex aliquo bruto animali, est doctrina de fide catholica tenenda. De fide enim est, animam humanam esse spiritualem et immortalem. . . . Quae quidem proprietates animae in sententia contraria saltem implicite formaliter negantur.*
>
> 2. *Ipsum corpus humanum non fuisse terminum evolutionis naturalis cujusve bruti animalis, ita ut Deus ad exigentiam illius organizationis infuderit animam rationalem, est doctrina adeo certa ut sine magna temeritate negari non possit.*
>
> 3. *Deum non fecisse corpus hominis ex bruto aliquo animali, transformando praeternaturaliter corpus ejus in corpus humanum, est doctrina communis et certa.*
>
> 4. *Noto denique, thesim nostram* (*Thesis: Primi parentes generis humani immediate a Deo conditi sunt*) *tanquam doctrinam fide catholica tenendam plures catholicos propugnare.* Ita *Suarez, De Opere sex Dierum,*

l. 3, c. 1, n. 4, 6; *Valentia*, In l. d. 7. q. 1, punc. 1, assert. 2; *Perrone, De Deo Creatore*, n. 230; *Katschthaler*, Theol. dogm. l. 1. p. 2, n. 219; *Jungmann, Tract. de Deo Creatore*, (Ratisbon, 1871), p. 152; *Mazella, De Deo Creante*, n. 513-2; *Pesch*, 'Compend.' t. 2, n. 267.

VIII. In his *De Deo Creante, Fr. Pignataro, S.J.*, begins with the observation that the views of Mivart and Leroy have been reproved many times by the Church and cites the decree of the Council of Cologne in confirmation thereof. His thesis reads: ". . . man was immediately created by the operation of God," and then enlarges on it as follows:

> But we do not exclude secondary causes, as the angels, or natural agents, in the formation of the body, as instruments of the Deity, although the instrumental concursus does not seem likely. But we altogether reject that man originated as far as his body is concerned from the transformation of species of animals of a lower order. . . . Reason itself, and the teaching of Divine revelation, forbid us to regard our first parent as a sort of monkey. (*Op. cit.*, p. 259.)

IX. *Père Hugon, O.P.*, in his treatise *De Deo Creatore* asserts:

> The absolute evolution of man is repugnant to Catholic doctrine. . . . Since our soul is spirtual, it is *metaphysically* repugnant that it should arise from the soul of brutes by evolution. . . . It is *physically* repugnant that the human body should be formed from an animal body without a special Divine intervention changing the brute matter and rendering it suitable for the reception of the superior form. Further, while such a Divine intervention is not absolutely repugnant, it is not to be allowed unless it be proved from the sources of revelation. But Scripture does not allow us to suppose that the human body was produced from a brute body, rather it says that God formed man from the slime of the earth, which words in their obvious sense indicate that our first parent was immediately created by God, both as to body and soul. (*Op. cit.*, p. 538.)

X. *Van Noort* (*De Deo Creatore*) formulates his thesis thus:

> Adam and Eve, both in body and soul, were created by God, no evolution intervening. (Op. cit., 113.)

A correct estimation of the words of the Biblical Commission concerning the creation of Eve, will, in Father Van Noort's opinion definitely settle the matter for Catholics. " The term ' peculiar creation of man ' of itself might admit indeed some latitude, but the term ' the formation of the first woman from the first man ' manifestly excludes all evolution for the body of Eve. But no prudent person would contend that the body of Adam was formed by evolution, and that of Eve without evolution. . . ."

XI. The "inferior" cast of Homo Neanderthalensis causes perennial concern to the anthropologist who would evade trans-

formism. Accordingly, two theories have been woven around that race. *Fr. J. Keating, S.J.,* in *Month,* October, 1927, suggests that Homo Neanderthalensis is a degenerate descendant of Adam, thus reconciling his inferiority with the revealed truth of the elevated state of our first parents. The "Pre-Adamite" theory has been resuscitated by *Fr. Humphrey Johnson Orat. Hurter.* Herve and other theologians deal with that assumption. Briefly it is this: a race of human beings lived either before or even contemporaneously with our first parents but never intermarried with them. These beings had been raised to the supernatural order, and accordingly the race was not contaminated with original sin. The Neanderthal race, it is presumed, was either the "Pre-Adamites" or descendants of them.

XII. *Sir Bertram Windle* frequently quoted a passage from the authorized primer for the children in Irish Schools, compiled by *Archbishop Sheehan* of Sydney, New South Wales. The Archbishop wrote: "The Church while teaching as of faith that God created the living things from which all existing plants and lower animals are descended, leaves us free to hold either the theory of permanentism or the theory of theistic evolution. According to the former, God by a distinct act created each species separately; according to the latter, He caused some or all species to develop in course of time from one or more directly created primitive stocks, or from inanimate matter. The Church condemns as contrary to faith the theory of materialistic or atheistic evolution, held by Haeckel and others, which denies, or ignores, the existence of a personal God . . . etc." (quoted in *The Commonweal,* June 6, 1928, p. 134.)

XIII. *Rev. J. Paquier* is of the opinion that no one holds to the doctrine of absolute immutability of species. In his book *La Creation et l'Evolution,* he boldly asserts that Catholic tradition is not opposed to the doctrine of evolution, that the Biblical Commission did not declare Transformism as untenable, that Catholic doctrine and the Bible have taught nothing definite against spontaneous generation. This book appeared in 1931. Father Richarz (*Eccl. Review,* May, 1933) assures us that the whole problem of evolution is in the hands of "competent" theologians.

XIV. Several years ago Fr. De Ternant published a lengthy series of articles entitled *The Church and Evolution.* These arti-

cles appeared weekly in practically every diocesan paper. Fr. De Ternant himself thus summarizes the views expressed in that series:

The Church says:

(1) There is nothing in this notion intrinsically repugnant either to the Scriptures or to Faith;

Quoting the Church

(2) She will not affirm it, even supposing it were true, because it is not her business to make such affirmations;

(3) Since she has not yet, in her practical judgment, yet obtained proofs from science of a sufficiently high order of moral certitude, she will not permit anyone to assert it as a fact while speaking in her name;

(4) When and if it receives physical proof as certain as (let us say) that enjoyed by the theory of gravitation as it left the hands of Newton and Kepler, it will no doubt be included in the regular programme of her scholastic establishments;

(5) Taking it as a "possible hypothesis" (as derivative creation applied to animals lower than man is taken for a 'probable hypothesis'), Catholics may freely work towards its establishment by research and discussion;

(6) If anyone chooses to make it a purely personal belief, he may. (*Pathfinders of Organic Evolution*, p. 40.)

And finally, Father Le Buffe's position may be stated. Near the end of a pamphlet—*Human Evolution and the Church,* he quotes the decree of the Biblical Commission, dated June 30, 1909. For our purpose the words relating to the body of man are sufficient to indicate the trend of Fr. Le Buffe's argument. "Can we, in particular," the decree reads, "call in question the literal and historical meaning when in these chapters it is question of the narration of facts which touch the foundations of the Christian religion; as for example, the creation of all things by God in the beginning of time; the particular creation of man; the formation of the first woman from the first man; the unity of the human race . . . ? Reply: In the negative." To which Father Le Buffe adds this commentary:

Put in the form of a declarative sentence this decree reads—we cannot call in question the literal and historical meaning of "the particular creation of man or the formation of the first woman from the first man." From these words we conclude that the Commission meant in the present state of evidence, which has not materially changed since the date of the decree, to deny that it is true that Adam's body had an animal ancestry and it meant to assert the immediate formation of Eve's body from Adam.

He admits, to be sure, that the decree is not an infallible pronouncement, but calls attention to the fact that a Catholic is bound

not to teach anything contrary to it. Thus he concludes: "... the Catholic Church has an explicitly definite and official attitude on certain aspects of human evolution. Its attitude is absolutely and irrevocably condemnatory of the evolution of a human soul out of an animal, and of the tribal evolution of man's body; it is also, though not in the same infallible and irrevocable manner, against the evolution of Adam's single body from an animal ancestor." (pp. 31 and 32.)

Homology and Evolution of Man

In *Thoughts of a Catholic Anatomist* Dwight concedes that morphologically there is a difference of degree, and degree only, between the apes and man. By that he wanted to say that man resembles one species of apes more closely in one or even several respects and another species in yet another respect, but never one species in many respects. Furthermore, he warns us that the longer one follows Proportions (longer 'this' compared to shorter 'that' etc.,) as a yardstick for determining common ancestry, the more involved and confusing the problem becomes. There is, moreover, small consolation for the evolutionist to be derived from the somewhat striking resemblances between the anatomy of present-day savages and that of "reconstructed" prehistoric races. The savage, in all events, is human; the prehistoric cranium or femur may, for all we know, may have belonged to something most assuredly brutish. "The various races of men," says Dwight (p. 165), "show occasionally ape-like features, but in very different degrees of frequency, and most commonly in what we call the lower races, whether those of today or the prehistoric ones. Yet ... these peculiarities cannot be brought to give concurrent evidence for any scheme of human descent."

Barry-O'Toole (*op. cit.*, p. 271) makes a somewhat similar concession when he says that the "striking anatomical differences between apes and men, though, not of sufficient importance to exclude the possibility of collateral relationship, are so many solid arguments against the theory of direct descent." However, when one has drawn up or read a list of the dissimilarities or disparities existing between the two—ape and man—he may be seriously inclined to deny even that 'possibility' of common ancestry.

This list of differentiations culled from reliable authors (Ranke, Virchow, etc.), is an indication of some of the many "somatic

modifications" that had to be brought about and transmitted genetically if the evolutionary theory is valid.

I. Dissimilarities

Man	Ape
Larger brain-case than the ape's.	The simian brain-case, however, is generally smaller. There is a small number of South American monkeys, e. g., the crysothrix, that have a relatively heavier brain than man has.
Comparatively small face.	Cranium has a protruding muzzle and powerful jaws.
Small teeth; vertically inserted.	Has projecting canine teeth.
Feet are adapted for support.	Feet are primarily prehensile organs; secondarily for progression.
Has the capability of strengthening the spine so that the head can be thrown back while the leg is straight at both the hip and knee and the foot be placed at a right angle.	The vertebrae are adapted for producing convexity of the back, precluding normal upright posture, enforcing progression quadrumanually.
Has relatively lower extremity longer compared with the upper.	The fore-limbs are long.
Relatively short hands and feet compared with the other limbs.	The hind-limbs are long.
Has double curve of the spine.	Single curve.
Marked mental protuberance.	No chin at all.
Slender waist.	No waist but a barrel-like torso.
Viscera are supported in the pelvis as in a receptacle.	Scarcely any support obtained from the pelvis.
The head is specialized for psychic functions.	The head is specialized for mastication and defense.
No muscles present to support the head in any other than a vertical position.	Possesses powerful muscles at the nape of the neck for carrying the head in a horizontal position necessitated by the mode of progression. They rise to an erect posture only when on the defensive.
The occipital foramen is centrally located.	The occipital foramen is eccentrically located in the rear base of the cranium.
The head rests on a free neck.	In most cases the head touches the sternum.
The body is almost entirely naked.	Generally covered with thick hair.
The arms can be stretched only to the limit of the body's height.	The chimpanzee's arms greatly exceed its height.

II. Homology and Anthropological Evolution

Man	Ape
Weight of Brain:	
The average is one thirty-seventh part of the weight of the body.	One one-hundreth part of the weight of the body.
Capacity of the brain:	
The average is 1500 c. cm.	Ranges from 5-600 c. cm.
Surface of the brain:	
From 2,196 to 1,877 sq. cm.	535 sq. cm. in the case of the orang-outang.

Cube of the brain capacity of various fossils and modern man:

	Male	*Female*
Neanderthal		
La Chapelle	1,530	.....
La Quina	.....	1,367
Gibraltar	.....	1,280
Trinil	940	.....
Piltdown	1,240	.....
Cro-Magnon	1,550-1,590	.....

Average modern European	Male	1,450	Female	1,300
Average modern Swiss	"	1,467	"	1,349
Czecho-Slovakian	"	1,415	"	1,266
Native Australian	"	1,310	"	1,154
Native Indian Veddahs	"	1,250	"	1,139
Papuans of New Guinea	"	1,236	"	1,125

A few *similarities* between some anthropoids and Man—which are "evidence" of common ancestry, points stressed by some Darwinists:

The same parasites infest man and apes (Cf. *Science*, April 12, 1929, p. xii, R. Hegner.)

Embryonic development (Will be considered in connection with "Recapitulation").

The menstrual cycle of the chimpanzee is 28 days; gestation 9 months.

Male spermatozoa of the gorilla is said to be closely similar to that of the human.

A fifth cusp is present in the lower molars of early man and in those of the anthropoids (An extensive article on this question, written by Wm. K. Gregory and Milo Hellman, in *Natural History*, May-June, 1926).

In the foetal stages of both the human and the ape the young are hairless, save for the scalp and the covering of down. Both are white and unpigmented, the unborn ape darkening shortly before birth.

Homology

When the paleontologist has reconstructed the "missing links" in the chain of fossils from the pro-mammalian tree-shrew to modern man, are we convinced of evolution? In other words, are we

incontrovertibly certain that evolution, in the quite commonly accepted sense of progression upward of new and more complex forms, has taken place? Does homology (similarity of organisms based on their possession of like parts arranged in corresponding order one to another) prove common descent or continuity? For most evolutionists the homological argument, although supported by relatively few primate fossils, affords sufficient and compelling evidence for the "fact" of anthropological transformism. The following quotations from *Creation by Evolution* are representative:

Evolutionists and the Homological Argument

"A student of fossils recognizes that when any kind of animal shows a tendency to change in some particular part, the degree of this change increases in successive generations, especially if the change at first gives it some advantage." . . . "Though the fossil apes were very different from modern apes, they must be regarded as the ancestors of modern apes and man." (Sir Arthur Smith Woodward, pp. 131-2.)

"Few People, I suppose, realize that their teeth are among the most ancient parts that make up the human body. They are, for example, older than the hair, which was derived from the horny scales of ancestors much nearer to our times than those which gave us our teeth." (Edward Bagnall Poulton, p. 175.)

"Human and simian relationships are not yet clearly traceable; they are inferred from close structural and functional similarities, the distinctions being referable to differences of habits and habitat. That man and the great apes are cousinly descendants from a common stock all scientists believe . . . etc." (Richard Swann Lull, p. 266.)

"Although the fossil record of the evolution of the Primates is meagre, it tends to show that the various groups appeared in the following succession: (1) tree shrews, (2) lemuroids and tarsioids, (3) monkeys, (4) pro-anthropoids, (5) diversified anthropoids, (6) primitive man, (7) modernized man." (Wm. K. Gregory, pp. 288-289.) Now we know that we *must have been* evolved. The evolutionist piously adds the *motiva credibilitatis* for doubting onlookers. "The natural egotism of man," writes Gregory, "made him easily credulous of the story that the first man, although made from the dust of the earth, was also created in the image of God. The knowledge that man has struggled upward to

his present estate from the less intelligent animals is still practically denied by the majority of mankind. . . . One can do no better than quote the noble words of Charles Darwin: 'We must, however, acknowledge, as it seems to me, that man, with all his noble qualities . . . with all these exalted powers . . . still bears in his bodily frame the indelible stamp of his lowly origin.'" (*Ibid.*, p. 291.)

The counter opinions of several scientists (two of whom are evolutionists, but who stoutly base their convictions on other arguments) may also be noted. There is, first, the analogy of Sir F. A. Bather wherein the ineptitude of the argument of continuity or succession of fossils is ably set forth. "Let us suppose," he said, "all written records to be swept away and an attempt made to reconstruct English history from coins. We could set out our monarchs in true order, and we might suspect that the throne was hereditary; but if on that assumption we were to make James I the son of Elizabeth—well, but that's just what paleontologists are constantly doing. . . . Descent, then, is not a corollary of succession, or to broaden the statement, history is not the same as evolution. . . ." (Address delivered at the Cardiff Meeting of the Geological Section of the B. A. A. C., August 24, 1920.)

Counter Opinions

There is another somewhat disturbing thing to be noticed in speaking of descent. It concerns a generally overlooked fact—the record of devolution or degeneration. Many evolutionists admit its existence but fail to see its significance. They recognize that organisms have in some cases gone "downhill" toward simplification. Morgan, for instance, noticed that many parasitic animals and plants possess less complexity "in comparison with their relatives" and forms from which they are supposed to be the descendants, but does not offer any sort of apology or explanation. Thomas Dwight, on the contrary, has interested himself in the problem and offers the following wholesome comment: "One of the most obscure and to me attractive of questions, is the wiping out of old civilizations. That it has occurred repeatedly, and on very extensive scales, is as certain as any fact in history. Why is it not reasonable to believe that bodily degeneration took place in those fallen from a higher estate, who, half-starved and degraded, returned to savagery. Moreover, the workings of the soul would be hampered by the degenerating brain. For my part I believe the Neanderthal

Devolution

man to be a specimen of a race, not arrested in its upward climb, but thrown down from a higher position. . . . We have been told . . . that there are few if any of the most degraded races of mankind whose language does not suggest a higher vocabulary than the one now in use. . . . None the less, there is a great objection to this view, the importance of which must not be denied, that the Neanderthal race was an excessively old one and that skeletons of the higher race which, according to the view I have offered, must have existed at the same time as the degenerate ones, are still to be discovered." (*Thoughts of a Catholic Anatomist,* pp. 169-170.)

Dissimilarity in Neanderthal Skeletons

Addressing a radio audience over the St. Louis University Station WEW late in October, 1929, Father Husslein, S.J., followed up the line of thought opened by Dwight when he observed that "... while there are certain more or less common characteristics between the individuals of any race, there are always decided differences, and so among the few Neanderthal skeletons we possess there are not wanting those with a relatively higher forehead, a less receding chin, and other features more like those of the ordinary present-day man. Encountering the Neanderthal face, clean-shaven, in a cosmopolitan crowd in New York, we should probably not turn our head. It would blend as one of the many in that conglomeration of humanity, even should its characteristics strike us, as might those of an Eskimo. Truly human! That we would not for a moment question."

Historical Pock-marks of Evolutionism

Next to the great Industrial Revolution of the last quarter of the XVIII century (for England) and for the rest of Europe in the XIX, the theory of evolution stands out in bold relief. The vogue of evolutionism, run amuck, is but the gigantic aftermath of XVIII century free-thought or rationalism. The doctrine of evolution has seeped through every strata of society. It has literally penetrated into every recess of thought, politics, science, history, philosophy and religion. Were it possible to stand aloof from the confusion of the entire discussion, to view it with a wholesomely academic impartiality, what would be one's estimate of the achievements for the manifold departments of life that evolutionists presume to have effected? Or conversely, has mankind been really disillusioned? How does it now evaluate the *unum*

necessarium in the light of evolutionary progress? Will it reach its destiny—if it has any destiny at all? Momentous questions, indeed, but setting aside rhetorical adornment which one is so easily inclined to adopt when broaching this theme, we shall briefly enumerate some of the by-paths into which great portions of society have been led by following in the wake of evolutionistic teachers:

Consequences of Evolutionism

I. Darwin and his foremost followers have understood evolution to be an "all-over" thing, a transcendental thing; nothing past or future is to be expected from the onward, upward march of events. Man, they tell us, has of himself risen to Parnassus and is to achieve still greater heights—the status of superman. But the disheartening thing about all this is its inability to satisfy the longings of the human race. There was One who said "Not in bread alone doth man subsist but in every word that proceedeth from the mouth of God." The doctrine of evolution has in many instances, notably in Darwin himself, sapped idealism from life. With faith, hope has gone out of their lives; the *Ultima Thule* of existence is the grave.

II. Followed up logically, evolutionism has been disastrous for many minds. It has led them into a tangle of vagaries—not mere abstractions but systems, codes, principles that permeate the warp and woof of their daily existence. I do not mean to assert that the subjoined list of errors are exclusively associated with a belief in evolution, but merely wish to indicate the fact that many adherents of evolution eventually fell prey to them. Not far remote, then, from evolution are:

a) Monism

b) Pantheism

c) Materialism, mechanism,

d) Determinism, moral irresponsibility. (Recall, for instance, the scientific Calvinism of Huxley: "The actions we call sinful are part and parcel of the struggle for existence," and "The moral sense is a very complex affair—dependent in part upon associations of pleasure and pain, approbation and disapprobation, formed by education in early youth, but in part also on an innate sense of moral beauty and ugliness (how originated need not be discussed), which is possessed by some people in great strength, while some are totally devoid of it.")

e) Agnosticism, e. g., Spencer's inscrutable Power, the Unknowable;

f) Infidelity—emancipation from the bonds of dogma and creed (and, of course, superstition and ignorance), for instance, "there is no evidence of the existence of such a being as the God of the theologians"—Huxley.

III. It has fostered the notion that all science is sensory; knowledge is based on the material universe alone.

IV. It is bringing about the dissolution of Protestantism, which (hazardous

statement though it be) is a detrimental thing for the millions who would never seek the security of Roman Catholicism even though Protestantism had never existed. In his early years as a Catholic, Cardinal Newman had declared that the Protestant Church could be looked upon as a breakwater against infidelity. Much later in life he observed how completely liberalism had undermined that institution.

> "In one respect," writes Carleton Hayes, "Protestantism was threatened by Darwinism more than Roman Catholicism. While the Catholic Faith was based on the writings of the Christian Fathers and on 'tradition' as well as on the Old and New Testaments, Protestants ever since John Calvin had insisted that the Scriptures were for them the sole rule of faith and the sole guide of conduct. Now, when scientific theories which appeared capable of demonstration indicated that the Bible in places was downright erroneous and throughout was hardly more than a 'unique record of the evolution of a nation's moral consciousness,' the Protestant notion of authority was rudely shaken, and the thoughtful Protestant felt himself constrained to modify his theological opinions." (*Political and Social History of Modern Europe*, II, p. 242.)

V. It gave rise to that compendium of heresies which infected the apologetic of dozens of modernists. Religion, they said, must needs be modernized. Dogmas and truth generally had evolved; centralized Catholicism must be weakened; the State must not be thwarted in any respect by ecclesiastical authority; anathema, then, to all anathemas,—and a score of other errors equally pernicious.

VI. The fittest must survive,—the insiders, for example, by a process of 'rugged individualism' may, without embarrassment, fleece the idiots on the outside.

VII. The "Nihilists" of Turgeniev ("Fathers and Sons") as well as the Nihilists of reality (during the reign of Alexander of Russia) were undoubtedly influenced by the Darwinistic concepts of their day, *viz.*, the inevitable progress of humanity from autocracy to democracy, from barbarism to culture.

VIII. The statement of General Friederick von Bernhardi throws considerable light on the mental undercurrent of European militaristic castes both prior to 1914 and since:

> "War is the father of all things," he quoted, and then went on to say, "The sages of antiquity long before Darwin recognized this. The struggle for existence is, in the life of Nature, the basis of all healthy development. All existing things show themselves to be the result of contesting forces. So in the life of man the struggle is not merely the destructive, but the life-giving, principle. . . . War gives a biologically just decision. . . . The knowledge, therefore, that war depends on biological laws leads to the conclusion that every attempt to exclude it from international relations must be demonstrably untenable. But it is not only a biological law, but a moral obligation, and, as such, an indispensable factor in civilization." (*Germany and the Next War*, 1912.)

DISCUSSION

FR. HUBERT VECCHIERELLO, O.F.M.:—Fr. Jerome's paper is, indeed, a splendid summary of the available information on his subject. It indicates an enormous amount of reading of authoritative expositions of the theory in the fields of science, philosophy, and theology.

There is no doubt that the time has come for all educated persons to acquaint themselves with not only the main outlines of the hypothesis but also with the principal arguments used by the proponents of this world-view.

Need of Knowing the Subject

To do this, one must look into the foundations upon which the hypothesis ultimately rests and this means more than a hazy notion of the geological, biological, and philosophical supports of the whole sweep of evolution. There was a time when the mere mention of this theory caused many to squirm but such an attitude of mind is unworthy of anyone calling himself educated in things scientific. Today we are on the threshold of a period when these discussions will not only be welcomed but more than a passing effort will be made to attempt to fit the theory of evolution into our general scheme or view of the universe.

Newton supplied us with a world-view as regards the inorganic universe, Darwin's great contribution has been to furnish us with a corresponding world-view with respect to the organic or living universe. At the present time no one of any importance in the various branches of science doubts the truth of evolution, but there will always be differences of opinion with respect to the manner or method in which evolution has or is occurring. "Although it is one of the principles of scientific thinking that such a theory as that of evolution is to be accepted as true only in the sense that it is highly probable, it can safely be said that no biological theory is better substantiated by the evidence than that of organic evolution. To accept evolution as a fact does not by any means involve the endorsement of Darwin's theory of how evolution has been or is being brought about, or of any other particular theory as to the method of evolution. At the same time, this problem of how new species evolve must be recognized as one of the most important of all problems having to do with living things" (Holman & Robbins, *Textbooks of General Botany*, pp. 550-551).

Reasonable Attitude toward Evolution

There is no one argument or set of arguments which any scientist can give to prove evolution, but the sum-total of the many arguments from the numerous sciences forms a weighty influence in its favor. No one pays much attention to atheistic expositions of the theory because now-a-days scientists are turning more and more to a belief in the existence of more than physical forces as the agents behind development, whether this refers to the inorganic or organic cosmos. The day of the apotheosis of materialistic laws and godless forces is passed and in their stead we see teleology, purpose, or design throughout the length and breadth of the universe. Belief in evolution does not conflict with any set of beliefs or religious tenets any more than an adherence to the principles of democracy or toryism militates against belief in Catholicity or Episcopalianism. We know from the pages of history that believing Christians have not only been scientists but actually founded many of the sciences themselves.

No Conflict with Religion

As to the implications and conclusions connected with human evolution, this is a point of very great interest to us as Catholics and as priests. We should know what tendencies to argue against and what to foster, because the

The Church as a Guide

day is not far distant when scientific theories and beliefs will profoundly affect the religious affiliations of all peoples. The pronouncements of the Church in these matters must be accepted, but we should know what the Church really says before launching out either for or against the theory of evolution in this particular case. No one has any right to set himself up as the last court of appeal on disputed points. The Church has told us how far we can go and what is unwarranted or even temerarious. Her words and not our personal likes or dislikes should dictate our course.

We should hold an open mind on scientific questions of all sorts, investigate their foundations, study their worth, scrutinize their tendencies and implications, and then plot our course of action. We should not permit any personal bias to enter into our study of these problems. With our training in philosophy and theology we should be able to give careful attention to any question having a bearing on the faith or morals of those who look to us for the final word in matters of this kind. We should make it our business to be in a position to decide what is beneficial and what is harmful, and we cannot hope to do this unless we are fairly well grounded in the many scientific lines of endeavor being pursued at present. This does not mean that we must become scientists, but it does mean more than a bowing acquaintance with relevant scientific theories, hypotheses, or whatever you wish to call them. If this is done, we will avoid the ridiculous spectacle of the Scopes' trial or the equally unsavory publicity of narrow-minded pronouncements or uncalled for dogmatism. Scientific facts and theories are best left to scientists, but when they philosophize or theologize, we should not hesitate to make ourselves heard because we are better equipped in such fields than the majority of scientists. It is a mistake to refuse to study the offerings of science, just as much as it is a mistake to offer conclusions on subjects on which we are not fully informed. There is little or nothing wrong with theistic evolution except a great deal of confusion and a loose use of terminology which a careful and patient study will soon clarify or dissipate completely.

Our Part in the Controversy

Teaching of the Church

Regarding the teaching of the Church on Evolution, or the Theory of Descent of all living creatures from some form or forms which were unicellular, this much can be said in this brief discussion:

The Church, while teaching as of faith, that God created the living things from which all existing plants and lower animals are descended, leaves us free to hold either the theory of Permanentism or the theory of Theistic Evolution. According to the former, God by a direct act created each species in the course of time from one or more directly-created stocks or from inanimate matter. The Church condemns as contrary to faith, the theory of Materialistic or Atheistic Evolution held by Haeckel and others, which denies or ignores the existence of a Personal God, and claims that life in all its forms has developed under the operation of blind forces or causes.

With reference to man, the Church demands that we believe in the creation of Adam, but it has never defined what is meant by the "slime of the earth" nor are we asked to believe that God actually shaped a figure of clay into which He instilled the breath of life. The Church has never taught this regardless of what anyone might say to the contrary, for even as early as the time of St. Augustine we find him saying that to believe or claim "that God with corporeal hands made a figure of earth," is in his own words *nimis puerilis cogitatio*—too silly an idea to be entertained. We may hold then:

What We May Hold

(1) That "if the proof were forthcoming tomorrow that the body of the first man was evolved from lower animals, it would not be found to contradict any solemn, ordinary, or official teaching of the Church."

(2) That there can be no possible objection to the use of this idea as a working hypothesis or scheme for the interpretation of things, but that until it has been established as a fact, the Church will go on teaching the direct creation of Adam's body by God. Baschab writing on this point says: "In following the immemorial practice of the Church, never to reject the old in favor of the new and unproved, it must commend itself as a reasonable and prudent method even to those not of the faith. There is no intrinsic impossibility, not even improbability, that God should not have used an existing animal organism as the body into which He infused the spiritual soul at the production of the first man."

Fr. Wassmann, S.J., tells us "that the theory of evolution, as a scientific hypothesis and theory of the origin of things, as far as it can be proved, is perfectly compatible with the Christian theory of the origin of things. According to this view, the evolution of the organic world is but a little line in the Book of the Evolution of the whole Universe, on the title-page of which still stands in indelible letters: "In the beginning God created Heaven and Earth."

ALBERT EINSTEIN AND RELATIVITY; ABBÉ GEORGES LE MAITRE AND THE EXPANDING UNIVERSE

Fr. Hubert Vecchierello, O.F.M., Ph.D.

Purpose of the Paper

The purpose of this paper is not to present an exhaustive or highly critical or technical discussion of the theory of relativity, but merely to collect some interesting data concerning two of the world's outstanding scientists. So many persons have inquired about the life and education of Albert Einstein, that it was thought useful to assemble these facts which otherwise might be inaccessible to many. Furthermore, the recent prominence accorded the work and words of the Abbé Le Maitre has also induced the writer to select as many typical examples of his work as were thought necessary to give the general reader more than a hazy notion of this scientist's explanation of an "expanding universe." No originality is claimed, the ideas concerning the life and work of the men discussed were taken wherever found and due credit is given whenever this was possible. Current literature of all sorts was consulted and pertinent facts excerpted as the exigencies of the case dictated. It goes without saying, that a paper of this nature could not go into the prolix history of the antecedents of the theory of relativity. In this, as in every other world-renowned scientific discovery, many men have contributed something to the final result achieved; but this does not in any manner detract from the genius of him who gave these several discoveries their final impress and universal application. If it appears that undue importance is attached to the work of Einstein, it must be attributed to the circumstances and not to any wilful or intentional slighting of those who have made Einstein's work possible by their previous researches in various fields of natural phenomena.

Every scientist acquainted with the trends in physical research over the past century, knows that the theory of relativity, whether it be the special or generalized theory, rests inescapably on the

Basis of the Einstein Theory

work of such men as Minkowski, Planck, Maxwell, Fitzgerald-Lorentz, Millikan, Michelson-Morley, and a host of others. In fact, there are many who claim that Einstein's special theory of relativity may be regarded as merely a generalization of the famous Michelson-Morley experiment in which Michelson and Morley sought to measure with great precision a quantity of fundamental importance, namely, the speed of the earth through the ether. It was due to the fact just mentioned that in 1905, Einstein generalized the foregoing result by postulating that it is in the nature of the universe impossible to find the speed of the earth with respect to ether. This postulate rests most conspicuously upon, and historically grew chiefly out of, the negative results of the Michelson-Morley experiment. (Cf. *Science,* May 10, 1929, p. 483.)

There is probably no other man in the whole field of science today who has aroused more interest and concerning whom so little is actually known as Albert Einstein, the founder of the Theory of Relativity.

Native of Ulm

Albert Einstein was born of Jewish parents in Ulm on the Danube, Württemberg, May 14, 1879. When the child was about a year and a half old, the family moved to Munich where Albert's father was part owner of an electro-technical works. The Einsteins led a rather secluded life in an atmosphere of quietness, serenity, and comfort. Such were the surroundings of the future scientist until his fifteenth year.

Influence of Two Scientific Works

It was during these formative years that he became acquainted with two books which made a very deep and lasting impression on the youth. A friend gave him Bernstein's *Popular Books on Physical Science,* and Buchner's *Force and Matter,* books which were then very well known and in great demand by those interested in the topics treated in them. These books exerted a great influence on the developing mind of the young man, in fact, they gave Einstein greater impetus to continue his studies of physical phenomena to which he had already shown a strong attachment. In 1921, he remarked concerning these books: "Bernstein's work is a very good book even now, and at that time it was the best of its kind. It has exerted a very great influence on my whole development. I do not think much of *Force and Matter,* but at

that time this book, too, made a deep impression on me" (Max Talmey, *Relativity Theory Simplified,* p. 163). Einstein showed little aptitude for studies other than those closely related to physics. He excelled in philosophy, mathematics, and physics. With reference to philosophy, it might be of interest to know that Einstein had become acquainted with Kant's *Critique of Pure Reason,* when he was but thirteen years of age. During these years he became so engrossed in the studies of his predilection that he took little or no part in the ordinary sports and games so delightful to the heart of every young boy. He found his recreation mainly in music which has always remained his principal pastime. He still plays the violin very well although he received but two years of formal training.

In 1894 or 1895 his family moved to Milan, Italy. He remained with his family only a half year going to Aarau, Switzerland, where he attended the cantonal school from which he later graduated. In the fall of 1896 he matriculated at the Polytechnicum at Zurich, attending the lectures while supporting himself by teaching mathematics and physics at the Institution. He graduated from the University in 1905 with the degree of Doctor of Philosophy. His parents, at this time were unable to give him any support due to financial and business reverses. This compelled Einstein to resort to teaching in a private capacity for a year or two at Schaffhausen and Bern. In 1902, he obtained a steady position as examiner of patents in the Patent Office of Switzerland located at Bern. Early in 1903, Einstein married and became a naturalized Swiss citizen. He remained in Bern as Examiner of Patents until 1909. During these six years he pursued physical research just as assiduously as ever before centering his efforts on problems in thermodynamics, electrodynamics, and optics. He wrote many articles on these topics publishing them for the most part in the *Annalen der Physik* between 1902 and 1909. In the short span of earnest and painstaking work comprised in these few years, Einstein earned the reputation of being an able mathematician and physicist.

At School in Switzerland

The work for which Einstein is chiefly known to the public is based on two theories of relativity: the Special Theory of Relativity, and the Generalized Theory of Relativity. His special

Two Important Theories

theory was elaborated between the years 1902-1905 and published in 1905 in the *Annalen der Physik* (1905, p. 891) under the title "Zur Elektrodynamik bewegter Körper," "On the Electrodynamics of Moving Bodies." This was the same year in which he received his doctorate from the University of Zurich. The required thesis for this memorable occasion was printed in the *Annalen* in 1906 under the title "New Determination of Molecular Dimensions" (*Annalen der Physik,* 1906, p. 289). In 1908 he accepted an invitation to lecture before the Congress of Physicists convened at Salzburg. The subject discussed by Einstein was on the relativity and quantum theories of light radiation. He made a profound impression on his distinguished audience by the depth and comprehension as well as by his forceful and lucid explanation of such abstruse problems which were the burden of his lecture. In this same year he brought to completion his investigation of the close connection between gravitation and inertia.

Teaches in Various Universities

In 1909, Einstein accepted, *pro forma,* and as a means of obtaining a better position, a lectureship at the University of Bern. In the same year he became professor extraordinary of theoretical physics at the University of Zurich retaining this until 1911 when he was called to the University of Prague as ordinary professor. In 1912 the University of Zurich offered him the chair of physics as ordinary professor at the Polytechnicum. In 1913 he accepted the call to teach at the University of Berlin, where he remained for one year. He was asked to take over the directorship of the newly founded Kaiser Wilhelm Institute for Physical Research in Berlin. To accept this position he had to receive special permission from the Kaiser because Einstein was not a German citizen. Upon receipt of the necessary permission, Einstein took over his new position where he remained until the recent Hitlerite upheaval in Germany forced all Jewish professional men to leave their posts and in many instances to quit the country of their birth or adoption (Einstein fled in danger of his life). During the many years of his tenure of the directorship of the Institute, Einstein lived and labored in Berlin, teaching theoretical physics at the University and carrying on numerous investigations at the Institute. He is also a professor of physics at the University of Leyden where he lectures twice a year for a few weeks at a time.

In 1916 Einstein's general relativity theory was published in the *Annalen der Physik* under the title "Die Grundlage der allgemeinen Relativitätstheorie," "The Basis of the General Relativity Theory." From this date on, Einstein has been rated the most renowned physicist in the world and honors without number began to pour in on him from the four corners of ths academic universe. He was elected a member of the Royal Prussian Academy of Sciences and given a stipend sufficient to enable him to devote all his time to research without any restrictions or routine duties. He was elected a foreign member of the Royal Society in 1921. The Academies of Amsterdam and Copenhagen made him a member of their respective organizations. Among the numerous universities which conferred honorary degrees on him one might mention the Universities of Geneva, Rostock, Manchester, Princeton, etc. He was given the Nobel Prize for outstanding work in physics in 1921. In 1925 the Royal Society gave him the Copley Medal and in 1926 the Royal Astronomical Society conferred on him the gold medal of the Society in recognition of his epoch-making work embodied in his theory of relativity.

First Publication of His Theory

It would be a mistake to imagine that Einstein's work has been confined to the narrow limits of such abstract problems as are embraced by the theory of relativity. His researches range through a large number of subjects and cover many fields. To enumerate some of the most pre-eminent one would have to include such masterful pieces of research as the complete theory and formulae of the phenomenon known as the Brownian movement or motion which had tantalized and puzzled physicists for nearly eighty years. Einstein was one of the first to appreciate the far-reaching implications of Planck's quantum theory. He spent many years trying to apply the quantum theory to as many problems as he thought it might solve or help elucidate. In 1905, 1906, 1909, and 1911 he published a series of papers incorporating the results of his endeavors and developing the "light-quantum" hypothesis which assumes that radiation when propagated has a "quantum-like" structure. It was while dealing with the transformation of these light quanta that Einstein formulated his law of Photo-electric Effect.

Wide Range of Research

He published a paper on the variation of specific heat with temperature which was the first extension of Planck's fundamental

quantum hypothesis verifying its essentials, thus establishing one of the strongest arguments in its favor among scientists.

Various Publications

Another paper published in 1917 contains the Law of Radiation which he deduced by using the generalized Bohr atom instead of Planck's linear oscillator. Einstein has published very many other papers on molecular physics and magnetism in the *Proceedings* of the Russian Academy of Science, the *physikalische Zeitschrift,* the *Proceedings* of the German Physical Society, the *Annalen der Physik,* and elsewhere. In 1929 Einstein published two short papers on what he calls a " Unified Field Theory," which is an attempt to find a mathematical expression of formal simplicity to represent comprehensively the laws of gravitation and electro-magnetism, physical phenomena which have so defied all efforts at unification as to be regarded as distinct and unrelated. If this new theory is ever confirmed, it will bring gravitation in line with all other branches of physics.

There are so many possible angles from which this theory of relativity might be viewed that it is necessary to limit the scope and aim of the few following ideas concerning it. Everyone knows that there is much confusion about the meaning and extension of the theory of relativity. Many have used the term " relativity " to make impossible statements in its name never intended or dreamed of by its author in the phrase " theory of relativity." " The relativity theory of Einstein still freshly challenges the curiosity and the intellectual grasp of those who have any desire to be informed on the present outlook in physical science. Relativity and its consequences are now just everyday mental tools of the physicist. In the range of events ordinarily observed and studied the triumph of the special and general relativity theories is that they have given a consistent, clarifying and simplifying re-interpretation of relationships in the world of matter and energy, without needing to bring to light more than a very few new phenomena, such as the bending of light beams by the great mass of the sun " (Max Talmey: *Relativity Simplified,* p. ix).

Ideas Concerning the Theory of Relativity

" The statement has been made that only twelve men can follow the mathematics applied by Einstein in his theory of gravitation. From this unprovable and unconvincing assertion, whose

Unjust Criticism

originator is unknown, arose the widespread rumor that only a dozen people in the whole world understand the relativity theory. This rumor is a myth. Competent physicists comprehend the theory and their number is certainly more than twelve. What is true about the rumor is that even highly educated non-physicists know very little of the relativity theory" (Max Talmey: *Relativity Simplified,* p. iii). The reason for this lack of understanding and appreciation is that the bases of the theory have not been made clear. One does not have to be a mathematician to have a fairly intelligent idea of the revolution of the planets around the sun, the phases of the moon, the ideas behind the causes of the tides, etc., etc.

The term " relativity " is much older in its use and application to things mathematical or physical, etc., than Einstein. It was used hundreds of years before its restricted use in connection with Einstein's special theories. Relativity in its simplest possible definition is the " relationship of one thing to something else." Simple examples of this pre-Einsteinian relativity are contained in all sorts of questions, e. g.: How tall was George Washington? Depending on the age of Washington, one could say three feet or six feet. Furthermore, position is a question of relativity in this simple sense. Thus a person standing on the streets in New York City and looking up at the Pole Star, feels that he is standing upright. People on a ship in the middle of the Indian Ocean, on the other side of the world, if we could behold them, would have their feet toward us and would appear to be hanging head downward. The same effect would be produced if the passengers in the aforementioned ship could see us, they would appear standing upright while we would be hanging downward. But to both those standing in New York City streets and on board the ship in the middle of the Indian Ocean, people on the southern tip of Africa and in New Zealand would appear to be standing at right angles to themselves. The same could be said of rain in these different parts of the world: it would appear to be falling down to a New Yorker when it rains in New York City, but to one on the other side of the globe, this would seem to be falling up at him if he could see through the mass of the earth while it rained in New York City. This kind of relativity is often known as Newtonian Relativity because it was known and appreci-

Manifold Meaning of Relativity

ated long before the advent of Einstein or his highly involved and technical theories.

It is well to bear in mind that this kind of simple relativity applied only to mechanical phenomena and did not take into consideration electrical and optic effects. Previous to Einstein's fruitful and revolutionizing investigations, it was granted that with regard to mechanical processes, all systems in uniform rectilinear motion are equivalent.

The factors which were unknown before Einstein and which are moreover fundamental to the relativity theory, are the relativeness of simultaneity of distant events, the retardation of a clock in motion relative to an observer, and the shortening of a length under the same conditions. The last two ideas imply a relativeness of time and spatial length.

A number of electromagnetic and optical experiments gave results which were at variance with firmly established theories and could not be accounted for by the laws and formulae known to the physicist. This caused scientists much trouble until Einstein promulgated two hypothesis as a solution of these difficulties. One of these he called the " Relativity Principle," and the other the " Principle of the Constancy of the Velocity of Light."

The Relativity Principle

1. " The Relativity Principle. The laws (mathematical equations) for all natural phenomena, electromagnetic and optical ones included, are the same (have the same form) in all systems which are in uniform rectilinear motion relative to each other. Two implications are contained in this principle. First, all such systems are equivalent for formulating the law of any natural process; no system is distinguished from all the others. Second, by no means is it possible to ascertain absolute rest or absolute uniform rectilinear motion; we can recognize only relative rest or motion. An observer is justified in regarding his system as the one at rest."

Velocity of Light

2. " Principle of the Constancy of the Velocity of Light. Light of every color travels with constant velocity in all directions independent of the motion of its source. Thereby the velocity is equal to the distance traversed divided by the time consumed in the travel. This principle implies that a ray of light has the same velocity for all observers irrespective of their state of uniform rectilinear motion relative to each other " (Max Talmey: *Relativity Theory Simplified,* p. 14).

To have some comprehension of what is meant by the simultaneity of distant events, we should have some general idea of what this phrase applies to. Thus two events far apart from each other in space, are simultaneous or not according to whether an observer stationed in the middle of the distance between them perceives them at the same instant or at different instants. Two distant events simultaneous for one observer in one system, for example, in a ship moving at a uniform speed in a straight line, are non-simultaneous for an observer in another system, for instance, from the shore of the waters upon which the ship is moving. Simultaneity of distant events is not absolute but relative, dependent upon the system from which they (the events) are observed.

Idea of Time

Einstein took the idea of time and subjected it to severe tests and found that it too was relative, that is, different for different observers in different frames or systems of reference. He got away from the Newtonian idea of the absoluteness of time and space, for if two flashes occurring on board ship are separated by a second as determined by the ship's clock, it was taken for granted that for an observer on shore, the flashes are also separated by a second of his clock. The observer on shore found the interval between flashes to be more than a second of his clock, that is, an interval is relative. He did the same for spatial length and found this to be relative also. These hypotheses were formulated into a theory known as the "Special Relativity Theory" because it applied only to systems in a special kind of motion, i. e., in uniform rectilinear motion. When this was extended to include systems in any kind of motion, namely, accelerated and rotary motion, the theory was called the "General Relativity Theory."

Exaggerating the Theory

"The interests of Physicists and Mathematicians are sufficiently explained by the ambitious character of a theory of which the aim is to combine in a single scheme temporal and spatial measurements together with gravitational phenomena, and by the fact that the theory includes a new law of gravitation, and a new Mechanics involving a breach with certain assumptions formerly supposed to be axiomatic, if indeed they were ever recognized explicitly. But in the case of Philosophers and of others to whom Natural Science is only of mediate or of secondary interest, another factor

enters into the explanation of the amount of attention they have given to the theory. This is the prevalence of the idea that Einstein's theory of relativity has implications which reach beyond the purely scientific domain; and that it may serve to throw light upon, and perhaps to lead to changes in, our general philosophical views of the nature of reality. There has thus been exhibited in some quarters a disposition to make this theory a starting point for the development of relativistic views outside and beyond the scope of the scientific theory itself.

It is a question of general epistomological interest whether, apart from the undoubtedly great importance of the theory in its purely scientific aspect, there is anything in the nature of Einstein's theory which should give it, in the eyes of philosophers and of the educated public, a unique position in relation to general thought, of a kind which other previously existing physical theories do not occupy. Is Einstein's theory not only technically, but also generically, different from earlier physical theories? Does it rest upon a philosophically different basis? The answer to the question raised is that no such difference exists: that it has in fact the same independence of all special ontological assumptions and theories as has Natural Science in general" (Hobson: *Domain of Natural Science,* pp. 316-318).

Is the Einstein Theory Different?

The Chairman of the Franciscan Educational Conference has asked me to include in this paper a few ideas concerning the work of the renowned Belgian priest-scientist and professor at the University of Louvain, Abbè Georges Le Maitre. The work of this eminent physicist is closely allied to the work of Einstein, De Sitter, Hubble, and others who are gradually seeking to model a new universe or rather a new set of concepts to describe an extremely old universe.

Le Maitre pursued the usual seminary courses leading to the priesthood, but was exceptional in that he took especial interest in astrophysical subjects. He has done some excellent work in this field and received a scholarship at Harvard University where he worked in 1924-'25 specializing in the application of the theory of relativity to astronomy. It was during these studies that the germ of Le Maitre's theory of the expanding universe began to take shape. The theory is a daring one, sweeping aside old astro-

Abbé Georges Le Maitre

nomical ideas and presenting a picture which is not only one of great splendor but also has the added beauty of seeking to reconcile several conflicting notions held by pre-eminent scientists. It is noteworthy to remark that Le Maitre first attracted the attention of Eddington, one of the world's greatest physicists, six years ago when he listened to a modest paper in which Le Maitre expounded his mathematical discoveries of an expanding universe which he likened to a gigantic soap bubble. Le Maitre's theory reconciled two diametrically opposed conceptions of the universe: Einstein's theory of the universe which was looked upon as curved and so static that it would collapse if it were disturbed; and De Sitter's idea of an expansive but empty universe. These two ideas were extremes and impossible in many respects. Le Maitre's concept of the universe is one which cosmologists accept at present—an unstable universe built along relativistic lines because it retains curved space and time welded to space.

Le Maitre claims that the universe is very young as astronomers view age and time. "The most striking thing about it," says Le Maitre, "is the short time scale." The beginning was only ten billion years ago or less. In the past these figures ran into thousands of billions of years. The age of the earth Le Maitre thinks to be two or three billion years. Observations at Mt. Wilson gave him the data upon which his conclusions are based. "Most of the work I have done with the theory of the expanding universe," he says, "is to reconcile it with the evidence of astronomers. It is a young universe. A billion years is a very short time from the astronomical point of view. We must face the short time scale to make up a cosmology of a young universe. What we want is a theory of cosmology with a very quick beginning.

Age of the Universe

We must place it at ten billion years, with the earth's age as two to three billion years. This gives a cosmology extremely quick in the beginning and then slowing up. We must have a fireworks theory of evolution. The fireworks is over and just the smoke is left. Cosmology must try to picture the splendor of the fireworks. If the earth were a hundred billions years old, or if the universe were that old, all the nebulae would be out of range of our telescopes and all radium would be exhausted" (It takes radium about 1600 years to disintegrate by one half).

According to Le Maitre's fireworks theory, it was a cosmic ex-

plosion some ten billion years ago which marked the birth of the universe by a process of expansion from a primordial atom containing all of its energy and mass. This explosion took place under heat of millions of degrees in temperature and marked the beginning of space. Le Maitre explains this by saying, "energy exists in packets and has the tendency to split up and divide into smaller packets. The universe is a great number of energy packets that continuously divide themselves. Go back of it all and energy must have existed in one packet. It is now impossible to see why they increase. It is yet very difficult to see how we can conceive the primordial quantity from which the world began. But we have the observational evidence. As to the word atom, let me explain. I call the original energy packet an atom because it is more or less convenient, and an atom is something which is undivided. It might as well be called a primordial quantum. It had more atoms than photons because matter came from it.

The "Fireworks" Theory

I do not insist too much on only one primordial atom. There might have been many. I just use that to explain and make the story simple. If we take this scheme of a primordial atom bursting, we can see matter forming. The essential difficulty is to see the enormous energy and time required to spread all particles into the universe we observe today. I think we can expect in the very near future, confirmation from the quantum theory to give us the fundamental understanding of essentials underlying principles of radioactive transformation. Then we can study the possibility of atoms of great masses of super-radioactive energy.

Primordial Atoms

We know that the volume of space is increasing. We know a type of evolution that gives a zero radius. When particles slow down between the equilibrium of the cosmic repulsive force and gravitation, energy will fall back and condense and form nebulae. Disintegration will tend to form local agglomerations of matter, such as we observe. I see no special difficulty for the formation of stars. When super-radiation escapes, quantities must continue into internebular space and this shows itself to us as cosmic rays.

When we try to find out things, we go first to the records as they are preserved for us. But that takes us back just a few thousand years. To go back farther, one must look to geology,

Looking at the Records

which leaves its records written in the layers of the earth. These reveal to us the past ages of the earth. But we must go even beyond that. That takes us to internebular space, where we should expect to find the story of the primeval fireworks that preceded the formation of the expanding universe. In that library of internebular space, we find the story, the characters of which are the writings of the cosmic rays. We must find in cosmic radiation, if my theory is correct, some electrical particles not only of the ordinary radioactive rays but of super-radioactive radiation.

It is extremely probable that the whole of existing energy of matter is involved in the phenomena revealed by cosmic rays. Cosmic rays are some sort of glance preserved for man of the primeval fireworks that started the expansion of the universe into ever-increasing space. I really think that the study of cosmic rays will give us the final answer to very many if not all the cosmological questions confronting us today. Cosmic rays are the birth-cries of the universe still lingering with us."

These ideas are quoted verbatim from several sources of an ephemeral nature, such as magazine articles, newspaper reports, interviews, lectures, and explanations given by the illustrious savant at Mt. Wilson and other localities during the past year or more. After listening to the learned Abbè's explanation of the genesis of the universe, Einstein arose before a gathering of mathematicians and physicists at Pasadena, California, to say: "This is the most beautiful and satisfactory explanation of creation to which I have ever listened," (*Literary Digest,* March 11, 1933, p. 23).

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DISCUSSION

FR. THOMAS PLASSMANN, O.F.M.:—After listening to Fr. Hubert's paper I must admit that it contains most lucid explanations of most difficult subjects. The theories propounded may still be debatable, but there is no doubt that both Einstein and Le Maitre have the eye and ear of the scientific world today. It is not without reason, therefore, that we assigned this paper for the Conference. If we would teach philosophy intelligently and correctly, we cannot neglect the study of science. In fact, the latest Constitution on Studies issued by the Holy See makes it plain that philosophy and science must be studied together, and I have it from the Prefect of Studies in Rome that the Holy See will consider no course of philosophy perfect unless there is alongside the study of philosophy a good course in science. We must go deep into science and reap the benefit for philosophy. If one of the results of this Conference will be greater interest in science where it has been lacking it will not have met in vain.

A Plea for more Science

THE FRIARS IN PRINT AND ON THE RADIO

Fr. Boniface McConville, O.F.M.

Of past achievements of this Conference this paper has nothing to say; its scope is rather to deal with the future. It essays to make several suggestions tending to broaden the activities of the Conference. These suggestions will be, principally, two: first, that there is a crying need of pamphlets and books explaining in popular style Catholic faith and Catholic philosophy; secondly, that an effective and widespread distribution of popular pamphlets and books be planned.

Now, the editing of pamphlets and books is not a new suggestion for this Conference, as the annual Reports amply prove. Indeed, for years, this Conference has prepared papers and discussions which make ideal reference works for men of higher learning, but we may question whether these works will interest the man in the street. Some may forthwith object that this gathering has not, thus far, aimed to interest the man in the street. I take this admission and endeavor to make it the point of my paper.

No New Suggestion

The high value and the necessity of technical and scholarly papers is freely admitted. But this paper insists that over and above the usual activity, some time should be devoted to the editing of pamphlets and books that will interest the ordinary reader. If the promoters of heresy and error can succeed in this point—and they have admirably succeeded—the champions of truth should not hesitate to devote some talent to writing for the masses.

I wish to state, at this time, that this paper is not dealing exclusively with a formidable phalanx of mere possibilities. This is more than a mere suggestion. The following is a list of books which are either in the hands of the printer, or in preparation, in our Province: *Holy Hour, The Virgin Birth, Science and Philosophy, The Problem of Plurality of Form, Catholics and Evolution, The Word of God, Biography of Gerard Raymond, Sermons for*

Books in Preparation

every Sunday, two volumes on the *Liturgy of the Church,* one volume on *Church History,* a book on *Apologetics, Science and Modern Thought,* a translation of the most recent German Catholic work on Sociology, a translation from the French of our illustrious confrere Father Louis Hennepin, a book of *Essays on Literature,* a volume on *The Masters of Literature, Essays on Current Topics,* a volume on *Catholic Education,* a volume on *Catholic Scientists* and a pamphlet on the rare books and incunabula in the library of Saint Bonaventure's College, Saint Bonaventure, New York.

Endeavoring to put our own suggestion into effect, the above list of books is being prepared, primarily, for the ordinary reader and we are doing our utmost to insure a wide circulation. That we write and speak the language that our people understand, is demanded by practical principles of applied philology. Is it not too true that when we employ the terminology of the scholastics, we are understood by the scholastics, and by them only? *Simpliciter, secundum quid, a quo, materia prima, haeccaeitas,* and thousands of other Latin, philosophical terms are full of meaning if you understand them. But perhaps your brother and mine prefer a paraphrasing of these words in the vernacular.

Now, specific instances are always enlightening. *The Story of Philosophy,* by Will Durant, published a few years ago, is enjoying a record-breaking circulation. Assuredly we have our own ideas about a story of philosophy, and we have a preference for a true story. I might add that we regret that Durant's *Story of Philosophy* is far from comprehensive. However, his presentation is clever and masterly. He has simplified and paraphrased heavy, technical terms. This is perhaps why his book is being read by millions in busses, in subway trains and in railway coaches, while a similar popularity of scholastic philosophy is unheard of. Perhaps the reason for this is to be found in the fact that while we possess the truth, we do not write for the commuters just mentioned. It strikes me that we should study the art of simple and popular presentation.

A Worthy Example

Fortunately, and advisedly, the liturgy of the Church is now being explained for the lay mind. We observe that quite a number of books are available which explain the beautiful ceremonies

A Plea for Simplicity

of the Church. Scholastic philosophy is hardly less mysterious to most people. For example: if we tell an ordinary workman that there is an objective morality and then speak to him about the norm—very likely he will listen politely, but there is a large probability that he is not following us. If, on the other hand, we tell him that there is a law which was written across the face of the earth by God himself, that every man is a subject and not a ruler, there is a large probability that our friend will follow us. The utter simplicity and the limited vocabulary of most people is amazing. Invariably in our writings we impress people to the effect that we are very learned men, but are we successful teachers unless we write simply and clearly?

If we Franciscans of the United States go ahead with this popular writing, what will be the results? Our philosophy will be simplified and made comprehensible for the youth of our country who, at present, are devouring attractive errors which are well written and well presented. It does not appear that this will demand any unreasonable compromise or sacrifice on our part. It will be no disgrace if we are understood. It is very evident that our philosophical terms may be inserted, in parentheses, after the understandable English; our traditional and sacred terminology need not be jeopardized. Incidentally, any popular and clear explanations of our philosophy will not only assist the man in the street, they will also help our students in the classroom. May I be so commonplace as to make the statement that many of our clerics, after completing their course, are able, only with difficulty, to define philosophy?

Originality is entirely lacking in the statement that there are many tasks before us. But first on the list of works that should be completed is a dictionary which will explain, in plain English,

Need of a Philosophic Dictionary

the technical terms which are used by the scholastics. This dictionary should be used in our philosophical course. And, instead of making a man neglectful of Latin, this dictionary will make him all the more interested in it. Looking up the English meaning of a term, the student will see the Latin and an association will be inevitable. Whoever will write this dictionary which will explain the terminology of the scholastics, will certainly render a great service to our cause.

Now, all of us love, respect and cherish our philosophical heritage. We do so because we have spent many years studying it. But as a matter of honesty, we must admit that so far as directing or affecting American thought is concerned, our truthful, beloved, respected and cherished scholastic philosophy has as much influence as the lost Grecian writings. Nevertheless scholastic philosophy is the philosophy of truth and as such is full of hidden beauty, and when we remove the technical cellophane and classical excelsior, people will see it and their lives will be influenced by it. I say this, on the one hand, with enthusiastic appreciation for what has been accomplished, but on the other, to suggest that our work is merely starting. Prominent among our tasks is that of writing for the ordinary man and woman who look to us for guidance. And, for the sake of intentional repetition, may I add that we can succeed if we simplify, clarify and popularize our sacred treasure.

Writing for the People

It appears, then, that there is an imperative need of utilizing the talent in the various Provinces for the writings suggested. Speaking and writing the language of this Educational Conference is one work; and this task has been successfully and admirably performed for the past fifteen years. But there is an urgent need for writing also a distinct type of pamphlet and book that will be understandable to the majority of our populace. A number of books over and above the list given in the early part of this paper, is now in preparation in our Province. One of these books will deal with the Objectivity of Morality, another will treat on Religion and Science. There are at least a dozen others, of this type which we feel will be understood by the ordinary reader.

In the present social crisis, when an understanding and an application of our philosophy is needed throughout the country, countless people will be delighted to hear from us regarding our position, for instance, on Capital and Labor. Immediately some may reply that this position has been stated a score of times during the past few years. True, but socialism and a spirit of unrest are making serious progress. And, we agree that in an effort to offset these grave losses many scholarly articles have been published by Catholics. The statement will probably bring forth debate, but most of the articles and books which state our position are above the intelligence of the people, to say nothing of the appallingly poor circulation that our works receive.

Capital and Labor

On Objective Morality and its Norm a scholarly paper has already been read at this Conference. An invaluable service will be rendered by us Franciscans of the United States if we will write and speak about the error of *subjective* morality briefly, pungently and clearly, for the people. One priest in each Province, at least, should try his hand at this subject. This can be done and it need not be *piis auribus offensiva.* Writing the language that our people can understand can scarcely be *offensiva* to even *auribus piissimis.* In this work, besides spreading the truth, we can do ourselves a great service; we can kill, for all times, the much spoken-of inferiority complex of which so many accuse us.

Error of Subjective Morality

A priest who has been ordained only a year will easily see that subjective morality is the heart and soul of the social and religious problem today. And, contrary to a rather current and complacent conviction, this error is by no means confined to Protestant and unbelieving circles. It is distressing for us to admit that many Catholics have for their code: "I mean, I feel, I think, I really do, Here's the way I look at it." And, after indicating their home-spun code in something like the above given language, they do as they please.

Now, we must admit that our masterly, scholarly and learned productions cannot reach this problem. There is a crying need for more of the simple vernacular. It is all too evident that cold, truthful principles of philosophy and morality, garbed in classical, technical and traditional abstractions, mean little to the farmer and to the street-car conductor. This problem is as close and as clear to us as our noses; that is why, perhaps, we become so accustomed to it that we seldom, if ever, see it.

As said before, many of the heretics and nominal agnostics of this country are masters of the art of expression and presentation. They are writing pamphlets and books which are selling in large quantities. The conclusion is plain—our separated brethren have evidently made a study of how to speak to the masses. It is also interesting and somewhat educational to note that, after having written their message, they exercise artistic, subtle and patient care to garb it in attractive style. Their productions are as temptingly attractive to the people as are fresh pies and cookies which are on display in a bakery window. I refer only to works on philosophy and kindred subjects; I make no reference to books

Imitating our Opponents

of a salacious nature. Surely we, not less than they, have the matter to present. But there is something the matter with our form. Regarding subjects for popular pamphlets, or books, suggestions may not be necessary. However, a few are offered: *Does Anybody Know What's Right? What Does Philosophy Mean? Is This Age Really Great? Why Does Modern Philosophy Leave Out God? What is Sovietism? What is Happiness? What is the Real Value of Education? Who Does Your Thinking? What is Agnosticism? What Have Catholics Done for America?*

Conditions for Sale

As far as possibilities for sale are concerned, the titles, covers and jackets for these pamphlets and books are frequently more important that the matter. If we hope to sell, it is necessary that the message be wrapped in a very attractive package. Our opponents are masters in this regard; they have nothing to offer but sophistry and a repugnant materialism, but they display their wares attractively and they sell millions of their books. So, although, we have the material and the truth, we will not succeed in distributing our works until we learn more regarding a pleasing presentation, an effective display and certain amount of indispensable salesmanship. We must win the attention of the prospective buyer before we can hope to have him purchase our books.

Unfortunately, the circulation of our works has thus far been lamentably limited because we have overlooked these necessary qualities in presenting our written word to the public. All may not concur in this since perfect unanimity is rare, but is it not quite true that our terminology has been too frigid, too stiff, and over technical and in consequence our distribution has been sadly limited and all too circumscribed?

The work suggested cannot be done in a few weeks or months. Those who engage in this activity must not be discouraged if they do not meet with immediate success. When our pamphlets and books meet journalistic and business standards, they will sell. We shall do well if we devote some time to the construction of the required, up-to-date vehicle for the delivery of the truth. The stagecoach was satisfactory in its day but automobiles and aeroplanes have taken its place today. Truth does not change, as we are aware, but the manner of presenting truth has changed considerably.

But not only the written word offers great advantages, the

spoken word over the radio can also produce much good. During the past six months, the Fathers of our Province have given, conservatively, forty talks over the radio from New York City, from Buffalo and from other stations. It is possible for us to use the radio, occasionally, and to convey welcome information to our listeners; this can be done without incurring any expense, as radio stations are pleased to devote fifteen minutes, or a half of an hour, now and then, for educational purposes. In our talks, of course, we had to keep to general outlines lest we antagonize any of the listeners, since the audience is always mixed. I repeat, then, that we can exert a powerful influence by means of the radio without endangering our budget. This opportunity should be used whenever possible in order to extend the scope and influence of the Franciscans in this country. We presume that the Friars in other Provinces have also taken advantage of this radio opportunity.

Use of the Radio

During the past few months, members of the faculty of St. Bonaventure's College have likewise given talks or lectures in more than one hundred high schools, most of them public, in New York, New Jersey and Pennsylvania. You may depend upon it, we found it possible to do this only by diligence, originality, and, at the same time, by almost Machiavellian diplomacy. Invariably on these occasions, the subject of these talks was the meaning of education. We made it our point to refer to and to stress the objectivity of morality and in this way we have reason to believe that we benefitted the pupils of many high schools. No doubt, we are referring to similar work done also by the Friars of many other Provinces. But for the benefit of those who have not yet availed themselves of radio and high school opportunities, we give here the assurance that a great deal of constructive work can be done in both fields. Let us hope, in conclusion that the Friars everywhere in this free land will continue their glorious tradition by using popular means of approaching the people.

DISCUSSION

FR. ANACLETE SUTHERLAND, O.F.M.:—The paper just read is very timely. It touches upon a matter very vital to every sane-thinking Catholic; it deals with nothing else then a practical way of co-operating with the Supreme Pontiff in the work of Catholic Action. Telling people what to do, and how to do it, is not always a pleasant task; but we think that Fr. Boniface has approached the subject in a way that will be productive of fruit.

A Timely Paper

Diplomacy is frequently a guise for the truth. The man who is always veiling his meaning, who is continually softening what he would actually say, misleads, confuses, or at best, leaves his listeners dissatisfied. The world has witnessed too much of this kind of thing and it has done more harm than good. The tendency today is to be out-spoken; to speak the whole truth, even though it may not meet with popular acclamation. In the interest of truth let us speak our mind fearlessly.

The True Franciscan Spirit

In reading Franciscan history, we find that St. Francis and his best followers were men of activity; they did not live in a cozy monastery-corner. They were men of Catholic Action in the highest sense. They went about using every legitimate means at their disposal to tell men of God. After working and preaching and mingling among men for the glory of heaven, they retired to some lonely spot, or convent, in order to attune again their spirits to the breathings of divine grace. In fact, all the saints of the Order down through the ages, have done the same. This is the true Franciscan spirit.

Living isolated within the monastery-walls is foreign to our calling. A Franciscan is not intended to lead a life of solitude and prayer only; the Holy Rule prescribes a life contemplative and active, neither should take up all his time. The active apostolate combined with contemplation is the mark distinguishing the Rule of St. Francis from the rules of the earlier monasticism. Activity, then, is an essential part of every-day life of a true follower of St. Francis. Of course, it should not extinguish the spirit of prayer, which must come before all things.

Conquering Self-complacency

Self-complacency seems to be one of the characteristics of the age. Let us hope that its influence will never take hold on the members of the Franciscan family. What has been done in the past is no credit to us; we have the present to live in, a wonderful tradition to imitate, and a glorious history to hand down unsullied to future generations. Energy, self-expression, courage to face criticism, "doers of the Word" that, in conjunction with holy poverty, is the outstanding trait of Franciscanism. Unless we carry on this spirit, we are false to the ideals of the Poverello.

Harking back to Fr. Boniface's paper, may we remark that he failed to mention the use of the daily and weekly newspapers. Most editors are only too glad to accept an interesting and well written article. The same may be said for periodicals throughout the country. Worth-while material is always welcomed. Surely we have more men who are capable of writing, and although some have been timid in this regard, others, we fear, may have mistaken an inferiority complex for humility.

A Broadcast for the Polish People

FR. GILES KACZMAREK, O.M.C.:—Speaking of the Friars on the Radio, I wish to call the attention of the Delegates to the good work of our Very Rev. Provincial, Fr. Justin Figas, O.M.C. Five years ago, i. e., 1928, Fr. Provincial instituted a Question Box on the air which he conducted in the Polish language over station WEBR of Buffalo. The interest shown in this feature grew to such an extent that in 1931 the Great Lakes Chain of radio stations was formed to give the benefit of this hour to cities with large Polish populations. It consisted of WEBR as the key station, WCFL, Chicago, which also broadcast on short waves; WGAR, Cleveland; WJBK, Detroit; KQV, Pittsburgh; WCBI, Scranton, Pa. The Rosary Hour, as this feature was called, was conducted over this chain from October, 1931, to May, 1932. In the fall of 1932, WODA of Patterson, N. J. was added

to the above list in order to serve the New York City area. This chain was engaged for two months, but on account of the lack of funds was given up and the powerful station WKBW of Buffalo was hired instead.

The cost of the Hour rose from $25.00 for the half hour over WEBR in 1928 to $1,998.00 for the initial, and $1,334.00 for subsequent broadcasts over the Great Lakes Chain. The entire expense was defrayed by contributions from the radio audience, and by the League of the Rosary Hour, an organization formed for the purpose of financing this religious radio feature for the Polish people.

The broadcast was conducted with the blessing of the Holy Father and the permission and hearty encouragement of His Excellency, the Bishop of Buffalo. The principal object of the Rosary Hour is to combat the Polish Independent Church, the Baptist and Bible Students' movements which are doing great spiritual damage in certain Polish communities. The results were truly marvelous. While broadcasting over the chain, more than 120,000 letters were received during the season of 1931-1932, while the highest number for one week was well nigh over 8,000. Practically all commended Fr. Provincial for his excellent work and the latter assures us that many marriages were validated as a result. Especially the clergy of the Scranton and Wilkes-Barre regions, where the Independent Polish Church is unusually strong, were particularly grateful to Fr. Provincial for the effectiveness of his radio sermons. The work of the Rosary Hour is also furthered by a publication of the League of the Rosary Hour, *Poslaniec Godziny Rozancowej*, a semi-monthly brochure, which at present enjoys a subscription list of 15,000.

Success of the Broadcast

THE PREFECT OF STUDIES

According to the *Statuta pro Regendis Studiis in Ordine Fratrum Minorum* of 1927

Fr. Sebastian Erbacher, O.F.M., Ph.D.

Conventual and Capuchin Friars on Studies

The General Constitutions of the Minor Conventuals and of the Minor Capuchins make no mention of a Prefect of Studies. The General Constitutions of the Conventuals leave the matter of the Provincial Studies entirely to a Scholastic Commission, composed of the Very Rev. Father Provincial and at least three other Fathers who are experts in pedagogy.[1] The decisive authority in all scholastic matters rests with the major superiors.[2]

The General Constitutions of the Capuchins subject the program of studies to the approval of the General Definitory.[3] The only other indication of special authority in the matter of studies is the provision that clerics are not to be promoted to a new course of studies unless they have been examined by the Provincial Superior, the Definitors, and the respective Lectors.[4]

[1] *CC. GG. O.F.M.Conv.*, 1932, n. 428, 2): In omni Provincia quae studia habeat, instituatur commissio scholastica trium ad minus Patrum praeter Ministrum Provincialem, qui in re paedagogica experti, in negotiis generalibus studia concernentibus audiendi sunt, praesertim cum agitur de delectu lectorum, de coordinatione studiorum inter varias scholas et collegia deque iis omnibus, quae quacumque ratione ad studia propria referuntur.

[2] *Ibid.*, n. 417: Superioribus majoribus cum propriis Definitoriis studiorum ordinatio receptaeque ordinationis modificatio reservatur. Ipsi prudenter in novis introducendis et in dubiis, quae graviora videntur, resolvendis, Consilia scholastica interrogare non omittant, ac pro rei momento ab ipsis scriptam, rationibus fultam sententiam requirere valeant. According to n. 418 the vote of the scholastic council is only consultive—"consilii votum consultivum."

[3] *Gen. Const. O.F.M.Cap.*, 1927, n. 187: Moreover, it is ordained that each Province, attention being paid to legitimate customs, shall have a program of studies, both with regard to the various sciences, and to the hours assigned to each, which shall be approved by the General Definitory and must not be changed without consulting the said Definitory.

[4] *Ibid.*, n. 188: Before Clerics are promoted to a new course of studies they shall be carefully examined by the Provincial Superior together with his Definitorium and the respective Lectors. When the examination is finished a secret votation shall be held.

"Statuta" of the Friars Minor

The office of Prefect of Studies is found for the first time in the legislation of the Order of Friars Minor in the *Schema Statutorum pro Regendis Studiis in Ordine Fratrum Minorum,* drawn up in accordance with n. 229 of the General Constitutions of 1897 by a special commission of six Fathers, appointed by the Most Rev. Minister General, Aloysius Lauer, O.F.M. The members of this commission were chosen from the following countries: America, England, Germany, Hungary, Spain, and Italy.[5] The *Schema Statutorum* was published with a running commentary in the *Acta Ordinis*[6] to enable all the Provinces to study it and to suggest modifications. The final edition of the *Statuta* was approved by the General Chapter of 1903. The Sacred Congregation of Bishops and Regulars confirmed them by decree of February 8, 1905, "*ad sexennium per modum experimenti,*" and again on September 7, 1911. At the General Chapter of 1927 a new draft was submitted and adopted. This was approved and confirmed by the Most Rev. Minister General, Bonaventura Marrani, O.F.M., October 20, 1927.[7]

The purpose of the *Statuta* in general and of the office of Prefect of Studies in particular is to secure for the Order uniformity of studies in essentials, and to allow to each Province the greatest liberty in accidentals.[8] The precise reason for the institution of the office of Prefect of Studies was the uniform direction of the Lectors and Students of the Province.[9]

[5] *Acta Ord.*, XVII (1898), 111.

[6] XVII (1898), 109, 125, 164, 175, 192, 205; XVIII (1899), 9, 26, 43, 60, 156.

[7] The Statutes for Studies were published by the Quaracchi Press under the title *Specimen Statutorum Pro Studiis Regendis In Ordine Fratrum Minorum* (Pro Manuscripto). They will be referred to in this paper as *Statuta.*

[8] *Schema Stat.*, I, *Acta Ord.*, XVII (1898), 110: Quam maxime necessarium est, ut omnia Studia Ordinis nostri *in essentialibus* eisdem legibus regantur, contra illud principium: *unaquaelibet Provincia quoad studia pro libitu sibi consulat.*

[9] *Schema Stat.*, Cap. X, n. 65, *Acta Ord.*, XVIII (1899), 45: Ut Lectores et Studentes in Provincia degentes sub una eademque permaneant directione, Lector officio functus eligatur, qui quoad scholastica negotia Lectoribus, Magistris disciplinae et Studentibus Provinciae praesit. The commentary to this number begins with the following words: Opus non est, ut iterum hoc in loco sermo instituatur de necessitate coadunandi in uno eodemque Conventu *omnes* studentes Provinciae, vel, si hoc absolute fieri nequit, de necessitate ita Studia constituendi, ut *formaliter* unum Studium habeatur, licet studentes in pluribus Conventibus versentur. Pro utroque casu requiritur unitas directionis, quae obtineri nequit nisi vir probus, doctrina, experientia scholae, dexteritate clarus, et a ceteris negotiis liber negotia scholastica dirigenda suscipiat.

Just as the functions of an organ are determined by its nature, the rights and duties of the Prefect of Studies follow from the nature of his office as defined by the *Statuta*. Adopting the plan pursued by the Rev. Bernard Baudaux, O.F.M., in his excellent paper on this subject,[10] I shall divide this essay into two parts: the first will treat of the person of the Prefect of Studies, and the second of his functions.

I

The Person of the Prefect of Studies

1. Position

The Prefect of Studies occupies an official position in the administrative organization of the Province. "Licet Minister provincialis praesit studiis, tamen in unaquaque Provincia instituatur Praefectus studiorum, cui munus integrum sit moderandi studia, sub dependentia a Ministro provinciali."[11] The Provincial remains the highest authority in the Province regarding studies as well as all other affairs. The institution of a Prefect of Studies is not a curtailment of the Provincial's jurisdiction, rather it is a means of rendering its exercise easier and more efficient. Before the Order had Prefects of Studies, the Provincials generally left the scholastic affairs to the Lectors.[12] To direct the studies of the Province is the whole task of the Prefect, but always with complete dependence upon the Provincial, which dependence is clearly indicated in the *Statuta*.[13] These require that the Prefect send an annual report of the scholastic progress of each student to the Provincial, and one regarding the observance of the *Statuta* to the Minister General, a copy of which must also be sent to the Provincial.[14]

Next to the authority of the Provincial that of the Prefect is dominant in all matters pertaining to the studies of the Province. The *Statuta* leave no doubt on this point: "Praefectus studiorum est verus moderator, licet sub dependentia a Ministro provinciali, *universae rei scholaris*, et tenetur ex officio ordinatam et perfectam

[10] "La Personne et le Rôle du Préfect des Études d'apres les nouveaux Statuts," *La France Franciscaine*, XIV (Juillet-Décembre 1931), 417-438.

[11] *Statuta*, Cap. I, n. 5.

[12] The Province of St. Denys, in the Chapter of Paris in 1902, appointed a Regent of Studies and two Vice-Regents, corresponding to our present Prefect and Vice-Prefects. Cf. B. Baudaux, *op. cit.*, p. 428, footnote.

[13] Cap. XIII, n. 105.

[14] Cf. *Schema Stat.*, *Acta Ord.*, XVIII (1899), 45, 157.

efformationem scientificam omnium alumnorum procurare et promovere." [15] The Prefect is the official director of the entire educational system of the Province, from the Seraphic Seminary to the special class of Sacred Eloquence, recommended by our General Constitutions (n. 257) for the junior priests after the completion of their course in Sacred Theology. Does this authority extend to high schools and colleges which are conducted by the Friars, but in which students are not preparing for the priesthood in our Order? The *Statuta* strictly treat of the studies in and for the Order only, and therefore do not touch this question. This is evident from the following words of the *Epilogus Schematis Statutorum:* "Nobis persuasum est unitatem Studiorum in Provinciis maxime esse necessitatis: propterea vehementer optamus, ut sicut unaquaelibet Dioecesis unum habet Seminarium, ita unaquaelibet ex nostris Provinciis unum habet Conventum Studiorum, in quo juvenes nostri spiritu seraphico et bonis sacrisque artibus imbuantur." [16] It cannot be said that such extension of authority would be out of place. Since the teachers of such schools are taken from the Province, the Provincial will quite naturally consult the Prefect of Studies and the Lectors before he makes the appointments. Periodical visits to these schools and conferences with the teaching staff would furnish the Prefect with much valuable information for his own work of direction of the studies, and at the same time be of no little advantage to the teachers themselves. To remove all doubt in the matter, however, the Provincial, with his Definitory, or the Provincial Chapter, would have to determine the extent of the Prefect's jurisdiction over such institutions. If these schools are not exempt from diocesan control, and consequently receive sufficient supervision from this source, it would be complicating the situation unnecessarily were the Prefect of Studies also to consider them a part of his field of operations.

The commentators of the *Schema Statutorum* make a remark which must be comforting to the teachers of these schools, especially since there are those who think that these institutions lie outside the Franciscan vocation. It reads thus:

> Vocatio specialis Franciscalium, sicut diximus, est *observare et praedicare D. N. Jesu Christi S. Evangelium:* hoc tamen non impedit, quominus magisterium pro extraneis exerceant, quia magisterium a viris

[15] Cap. XIII, n. 97.

[16] *Acta Ord.*, XVIII (1899), 157.

evangelicis exercitum est *forma quaedam* praedicationis, quae aliquando utilior, aliquando praestantior, aliquando ordinaria forma magis necessaria est. Cur igitur ab ea Franciscales abhorere debent? [17]

Apart from the Provincial, the Prefect of Studies, and the Vice-Prefects, no one else has a right to interfere in the direction of studies of a Province. This by no means implies that others should not co-operate as far as possible in the work of forming good and learned priests.[18]

The authors of the *Schema Statutorum* and its commentary regarded as ideal an arrangement which would provide for all the studies of a Province in one house.[19] Most Provinces, however, found several houses of studies necessary. Many duties of the Prefect of Studies demand his personal presence either immediately or with as little delay as possible. Therefore he had to be represented in each of the several houses of studies by a priest specially designated for that purpose. Thus the office of Vice-Prefect was gradually and cautiously introduced. The *Schema Statutorum* (Cap. X, n. 68) ordained: "Absente Praefecto, eiusdem partes agat is ex Lectoribus, cui vices Praefecti Minister Provincialis commiserit." The commentators added: "Articulus praecipue respicit casum, in quo plura sunt Studiorum loca, et in locis Studiorum plures sunt Lectores. Unus igitur in Provincia rei scholasticae praeest moderator, sed plures esse possunt, servato ordine, eiusdem vicarii." [20] The *Statuta* of 1905 made the appointment of a Vice-Prefect dependent upon strict necessity.[21] The *Statuta* of 1927 (Cap. I, n. 7) acknowledge the necessity of Vice-Prefects for the better direction of studies in a Province with more than one house of studies.[22] The rights and duties of the Vice-Prefect are the same as those of the

Vice-Prefects

[17] *Acta Ord.*, XVIII (1899), 62.

[18] *Statuta*, Cap. I, n. 7: Pro meliore regmine, ubi plures sunt domus studiorum, a Definitorio provinciali, audito Praefecto studiorum, instituatur Vice-praefectus etiam pro singulis domibus, ubi studia sunt. Istius est praeesse studiis iuxta commissam sibi potestatem, tamen sub dependentia a Ministro provinciali et Praefecto. Aliis autem quibuscumque in Provincia omne ius directe se ingerendi in regimen studiorum censetur ablatum. Attamen omnes conspirent in efformandos probos atque doctos dispensatores Mysteriorum Dei.

[19] Cf. *Acta Ord.*, XVIII (1899), 157.

[20] *Acta Ord.*, XVIII (1899), 46.

[21] Cap. XI, n. 52, *Acta Ord.*, XXIV (1905), 155: Pro singulis autem locis, in casu strictae necessitatis instituatur Vice-Praefectus.

[22] Cf. note (18), p. 6.

Prefect whenever the latter is absent or in any way hindered from performing the duties of his office.[23] Therefore, a Vice-Prefect should be appointed for each house of studies, including the Seraphic Seminary. Since the *Statuta* expressly state that the direction of the studies in the Seraphic Seminary can be committed to the Rector "sub dependentia a Praefecto studiorum,"[24] they imply that he is to act as the Vice-Prefect of that institution. By the same token the Rectors of the houses of Theology and Philosophy ought to be the Vice-Prefects of Studies in their respective convents.

Privileges

Among the active Lectors enjoying the privilege of precedence the Prefect of Studies holds the first place among equals, but not among the Jubilarian Lectors, unless he be one of them.[25] The *Schema Statutorum* gave the Prefect of Studies an active voice in the Provincial Chapter.[26]

2. Appointment

The old *Statuta* reserved the right of appointing the Prefect of Studies to the Minister General upon the representation of the candidate by the Definitory of the Province. The commentators of the *Schema Statutorum* give two reasons for this reservation: The importance of the direction of the studies of a Province for the Order in general and the respective Province in particular, and the difficulty of finding a competent man for the position in some poor Provinces on account of a lack of priests.[27] The new *Statuta* give the right of appointment of the Prefect of Studies to the Provincial Chapter, without prescribing a limited tenure of office. If a vacancy occurs outside the Provincial Chapter, the Provincial with his Definitory shall make provision until the next Chapter.[28]

The qualities which the Prefect of Studies should possess are very briefly expressed in the *Statuta,* which oblige the Provincial Chapter to choose for this office a man commendable for his religi-

[23] *Statuta*, Cap. XIII, n. 107: Quae de iuribus et officiis Praefecti studiorum statuta sunt, valent quoque pro Vice-praefecto, illo impedito vel absente.

[24] Cap. III, n. 23.

[25] *CC. GG. O.F.M.*, n. 588, 19); *Statuta*, Cap. XIII, n. 113.

[26] Cap. XV, n. 92, d), *Acta Ord.*, XVIII (1899), 62: Praefectus Studiorum, duo ex antiquioribus et duo ex junioribus emeritis aut jubilatis habent etiam vocem activam in Capitulo Provincialibus.

[27] Cf. *Acta Ord.*, XVIII (1899), 46.

[28] Cap. I, n. 6: Nominatio Praefecti studiorum fit in Capitulo provinciali. cuius erit ad tale munus eligere virum religiosa agendi ratione et magisterii arte valde probatum. Praefectus in officio confirmari potest. Si extra Capitulum munus Praefecti studiorum vacaverit, Minister provincialis cum suo Definitorio provideat usque ad proximum Capitulum.

ous observance and teaching ability.[29] The com-

3. Qualities mentators of the *Schema Statutorum* are slightly more specific in enumerating the qualities of the Prefect. Emphasizing the necessity of uniform direction of studies in the Province, whether the students are gathered in one house or spread among several convents, they declare:

> Pro utroque casu requiritur unitas directionis, quae obtineri nequit nisi vir probus, doctrina, experientia scholae, dexteritate clarus, et a ceteris negotiis liber negotia scholastica dirigenda suscipiat.[30]

The qualities of the Prefect are therefore threefold: religious, intellectual, and professional.

(a) *Religious.* It stands to reason that the Director of Studies in a religious community must above all be a good religious himself, a *vir probus* and *religiosa agendi ratione valde probatus.* The very purpose of Franciscan training is the observance of the Gospel of our Lord Jesus Christ, the formation of worthy ministers of God,[31] true pastors of souls,[32] religious and priests worthy of the name.[33] The Lectors are instructed not only to teach their pupils the required sciences, but likewise to give them an example of exact regular observance. They must educate the youth entrusted to their care in accordance with ecclesiastical and truly Franciscan form, so that the students may learn goodness as well as discipline and the sciences.[34] The spiritual direction of our students is repeatedly stressed in our General Constitutions as well as in the *Statuta.* Learning without true piety is as barren of results as piety without the requisite knowledge. Now, the director of this complete spiritual and scientific education of the youth of the Province must needs be an exemplary religious himself. He should as far as possible be an example of the product of Franciscan education. In the performance of his duties occasions will arise which will make heavy demands on his spirit of obedience, patience, charity, prudence, and humility. Successful leadership in any field of human activity depends largely upon personality. In no field is this more true than in that of education.

(b) *Intellectual.* It is also evident that the Prefect of Studies

[29] Cf. note 28, p. 8.
[30] *Acta Ord.*, XVIII (1899), 45.
[31] *Statuta*, Cap. I, n. 8.
[32] *Ibid.*, Cap. V, n. 32, c).
[33] *Ibid.*, Cap. VII, n. 46.
[34] *CC. GG. O.F.M.*, n. 273; *Statuta*, Cap. XII, n. 92.

must be a good teacher, *magisterii arte valde probatus,* and a *vir doctrina, experientia scholae, dexteritate clarus.* He is the inspector and supervisor of the schools of the Province. It is his principal duty to see that the *Statuta* are faithfully observed by Lectors and students. Unless he himself has taught successfully in the classroom, and has had ample contact with teachers and pupils, he will not be able to judge either the teaching of the Lectors nor the achievement of the students. The Prefect must not only be well versed in his own specialty, but he must likewise possess a general knowledge of the entire subject matter offered by the various schools of the Province. He must have that wide vision and broad sympathy, which a cultural and liberal education alone can give, and without which he will lack the sense of rightly evaluating the various disciplines and a proper understanding of the difficulties which may be encountered by Lectors and students.

(c) *Professional.* Although the *Statuta* do not specify the science of education in its modern sense as a prerequisite for the Prefect of Studies, they nevertheless imply that he should be conversant with the best educational thought regarding theory and practice, not only in other Provinces of the Order, but also in Seminaries and other Catholic institutions.[35] It is indispensable that the Prefect be well informed about the methods and class procedures of these schools, for the *Statuta* enjoin that our studies are never to be inferior to those of the Seminaries of the region in which we are located.[36] A number of obligations incumbent upon the Prefect by virtue of his office support my contention that he should have at least some pedagogical training. He is one of the official judges of the examinations of the students,[37] and together with the Lectors must testify to the worthiness of a student for promotion to a higher course of studies.[38] Together with the Provincial he must see to it that the students are provided with a

[35] *Statuta,* Cap. XIII, n. 97: Valde autem interest ut interdum Praefectus studiorum aliarum regionum, per epistolare commercium, quae sunt rei scientificae percontetur, eum in finem ut quae meliora alibi sunt excipiat, quae meliora apud ipsum habentur, retineat. De illis, quae apud Seminaria ecclesiastica (praesertim ubi haec perfectiora se exhibent) vel Universitates aut Instituta catholica in arte magisterii observentur, Praefectum decet esse instructum: sunt enim totidem media ad finem muneris sibi commissi pertingendi.

[36] Cap. I, n. 4: Curandum tamen, ut studia nostra nunquam sint inferiora studiis, quae peraguntur in Seminariis eiusdem regionis.

[37] *Statuta,* Cap. X, n. 64. [38] *Statuta,* Cap. II, n. 11.

special library adapted to their needs and with suitable scientific apparatus.[39] He must be consulted in the choice of Lectors,[40] and if a Lector be hindered from meeting his class, he must substitute for him.[41] His advice is to be asked in the selection of textbooks.[42] Every year before the opening of school he should call a meeting of the Lectors in the several houses of studies,[43] and take part in the regional or national conferences of Lectors.[44] The Prefect must prepare the annual scholastic calendar.[45] Once a year he must send a report to the Provincial and to the Minister General.[46] Finally, as a means of insuring the better performance of his duties, he should communicate with the Prefects of Studies of other Provinces, and keep himself informed regarding the educational methods of other Catholic institutions of learning, especially of the Seminaries.[47] This array of responsibilities calls for a professionally trained educator.

4. Incompatibility

Even officials who are clothed with the highest authority are limited in human powers. Good will alone is no adequate compensation for this natural limitation. It is far better not to create an office than to call one into existence and then bestow it upon a man who is already burdened with more than the average amount of work. Our General Constitutions (n. 399) wisely decree the incompatibility of certain offices. At times it may be true that "if you want something done, ask a busy man," but it is borne out by experience that "a jack at all trades is a master of none." The question is this: What other charges are incompatible with the office of Prefect of Studies?

The *Statuta* do not answer this question expressly, but they certainly manifest the mind of their authors when they determine the nature and the duties of the Prefect. In the first place the Provincial cannot be the Prefect of Studies. The commentators of the *Schema Statutorum* give the following reasons: (a) In the choice of a Provincial it is not so much a question of a learned man or of an expert in school affairs, but rather of a good disciplinarian; (b) his innumerable cares prevent him from giving his

[39] *Statuta*, Cap. II, n. 12; *CC. GG. O.F.M.*, n. 261.
[40] *Statuta*, Cap. XI, n. 75, a).
[41] *Statuta*, Cap. XIII, n. 101.
[42] *Statuta*, Cap. II, n. 13.
[43] *Statuta*, Cap. XIII, n. 102.
[44] *Statuta*, Cap. XIII, n. 108.
[45] *Statuta*, Cap. XIII, n. 103.
[46] *Statuta*, Cap. XIII, n. 105.
[47] *Statuta*, Cap. XIII, n. 97.

personal attention to the matters of study; (c) his term of office is set for three years, while the direction of studies, their order and progress, require that the Prefect remain in office for a longer period of time; (d) if the Prefect is not the Minister Provincial, he has a superior in the Province who will humbly and charitably correct those who fail in their duties, whereas, if the Provincial is the Prefect, only one remains his superior, and that at a great distance, the Minister General, who cannot occupy himself immediately with everything.[48]

The offices of Prefect of Studies and Master of Novices are incompatible. The General Constitutions (n. 50) make this plain when they ordain that the Master of Novices and his assistant shall be free from duties which may impede the direction of the novices. The latter work demands the continual residence and the entire time and attention of the Master.

Can a Master of Clerics be the Prefect of Studies? It is contrary to ecclesiastical legislation to make the head of a Seminary the spiritual director of the students. The two offices are essentially distinct. The same difference holds in the case of our spiritual director of students, the Master, and the Prefect of Studies. The Prefect must be an administrator, an executive, a judge, chiefly interested in the faithful observance of the rules laid down for the advancement of the studies of the Province; the Master of Clerics should be a spiritual guide, a kind father, whose interest in perfect discipline is that of a director of souls toward holiness rather than that of a mere custodian of the law.

The man usually chosen as Prefect of Studies is an actual Lector. Is this strictly in compliance with the law? A Lector engaged in teaching is confined to the classroom and to his special subject. He finds little time for ought else. Opportunities to widen his mental horizon and to keep abreast with the new developments in the ever increasing field of education are few, nay often completely lacking. If there are several houses of studies in the Province, as is generally the case, he will be unable to visit them during the school year without detriment to his own classes. He might at times perform the functions of an inspector, but he will never act successfully as a supervisor of instruction, as his office demands. To some extent the Vice-Prefects can take care of the

[48] *Acta Ord.*, XVIII (1899), 45.

houses of studies other than the one in which the Prefect resides, but their authority is limited and dependent upon the Provincial and the Prefect. If their power were broadened to the exclusion of the need of a Prefect, their vicarious character would be destroyed and the unifying principle of the entire educational system of the Province eliminated.[49] P. Bernard Baudaux, in the place just cited, compares an active Lector who is at the same time the Prefect of Studies to a generalissimo who retains the actual command of the army. The head of the staff does not lose himself in the ranks. It might be added that such a combination of offices is as practical and as desirable as that of Provincial and Guardian. Canon law has weighty reasons for requiring different persons for such divergent functions. In all great enterprises, and our educational system is one of them, the chief is the principle of organization. He must co-ordinate its elements and make them subservient to the common end. He must view the whole from a point of vantage.

The Prefect of Studies should be a man who is free from all other duties and thus in a position to devote himself exclusively to the manifold tasks assigned to him by the *Statuta,* which expressly state in Cap. I, n. 5:

> Licet Minister provincialis praesit studiis, tamen in unaquaque Provincia instituatur *Praefectus studiorum,* cui munus integrum sit moderandi studia, sub dependentia a Ministro provinciali.

The words "cui munus integrum sit moderandi studia" need no elucidation. The *Schema Statutorum* proposed for this office a Lector who was no longer actually teaching: "Lector officio functus eligatur." [50] The commentators in their explanation of this article touch upon the requisite qualities of the Prefect of Studies and do not hesitate to add that he must be a man "a ceteris negotiis liber."

Unfortunately most Provinces at the present time will find it very difficult, if not impossible, to set aside a competent man exclusively for the office of Prefect of Studies. In this case the next best choice that can be made is an actual Lector, who is not the Master of Clerics, and whose teaching load has been reduced to a minimum.

[49] Cf. B. Baudaux, *op. cit.*, p. 423.
[50] Cap. X, n. 65, *Acta Ord.*, XVIII (1899), 45.

II

The Functions of the Prefect of Studies

The new *Statuta* enumerate the duties of the Prefect of Studies in a more detailed form than they were expressed by either the *Schema Statutorum* or the first *Statuta* of 1905. The Prefect is the true director of the entire scholastic system of the Province and by virtue of his office he is obliged to procure and promote the systematic and scientific formation of all students.[51] He is the principle of order and unity in the studies of the Province, directing both teachers and pupils to their common educational end. As a "verus moderator" he is not a mere figure-head, nor a mere silent partner in the important business of training our young men. He must be an active, not a passive principle of unity. To *moderate* means to rule with measure, to keep within reasonable bounds, to preside over, and to direct. All this signifies action. "Operari sequitur esse." Applying this principle in a wider sense than in its philosophical use, he that *is* something should also *do* whatever that something imports. The Prefect is not only a pedagogical policeman with the negative functions of preventing evil, ferreting out delinquencies, settling disputes, and removing abuses. His task is very positive. He must bring all his knowledge, training, and experience to bear upon the educational machinery of the Province and steer it in the course mapped out by the laws of the Church and the rules of the Order. His authority is not arbitrary, however, but determined, specified, and limited by its purpose, which is the ultimate measure of his rights and duties. This purpose is to procure and promote the systematic and perfect scientific training of the students according to the *Statuta*. Although the latter are approved "ad experimentum," they are nevertheless the present law in force and must be observed. Made by experienced men, weighed by the entire Order, given a number of years of trial, and finally approved and confirmed by learned authorities, their faithful observance will bring great blessings and raise our studies to a high standard. The Prefect himself must

Moderator

[51] *Statuta*, Cap. XIII, n. 97: Praefectus studiorum est verus moderator, licet sub dependentia a Ministro provinciali, *universae rei scholaris*, et tenetur ex officio ordinatam et perfectam efformationem scientificam omnium alumnorum procurare et promovere.

give a good example in obeying these regulations, for all genuine reform in an organized body must begin at the top. This general duty of the Prefect can be summed up in the words of the *Epilogus* of the *Schema Statutorum:* "Praecipuum munus Praefecti in dirigendis scholis juxta Statuta repositum est." [52]

Religious Training

The religious and sacerdotal training of the students is not directly committed to the care of the Prefect of Studies, but rests with the Masters of Clerics and the Spiritual Directors. This does not mean, however, that the Prefect has no concern with the spiritual formation of the students. As "verus moderator universae rei scholaris" he may not ignore the most important element in the education of our youth. What Pope Pius XI declared regarding Christian education in general holds especially in the case of religious and priestly training:

> Christian education takes in the whole aggregate of human life, physical and spiritual, intellectual and moral, individual, domestic and social, not with a view of reducing it in any way, but in order to elevate, regulate and perfect it, in accordance with the example and teaching of Christ.[53]

The Holy Father points out that religion must be the beginning and end of the entire training of youth, and that religious instruction alone does not make a school a fit place for Catholic students. He writes:

> To be this, it is necessary that all the teaching and the whole organization of the school, and its teachers, syllabus and text-books in every branch, be regulated by the Christian spirit, under the direction and maternal supervision of the Church; so that religion may be in very truth the foundation and crown of the youth's entire training; and this in every grade of school, not only the elementary, but the intermediate and higher institutions of learning as well.[54]

He makes his position clearer by quoting the words of Pope Leo XIII from the latter's Encyclical Letter *Militantis Ecclesiae,* August 1, 1897:

> It is necessary not only that religious instruction be given to the young at certain fixed times, but also that every other subject taught, be permeated with Christian piety. If this is wanting, if this sacred atmos-

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[52] *Acta Ord.,* XVIII (1899), 157.
[53] Encyclical Letter on the *Christian Education of Youth,* Official and Complete Text (Washington: N. C. W. C., 1930), p. 36.
[54] *Ibid.,* pp. 30-31.

phere does not pervade and warm the hearts of masters and scholars alike, little good can be expected from any kind of learning, and considerable harm will often be the consequence.[55]

There can be no doubt about the jurisdiction of the Prefect of Studies in matters pertaining to the spiritual training of the students, for the *Statuta* provide for it in the following words:

Licet Praefecto studiorum non est *directa ratione* demandatum, quae sunt efformationis religiosae et sacerdotalis in alumnis procurare et promovere: attamen ab ipsius cura minime est censendum talis ablegari, cum tota efformatio scientifica, virtute comite et tradenda et excipienda sit: schola enim optima palaestra cuiusque virtutis consuevit salutari.[56]

The Prefect will be content to leave the spiritual training of the students to the Masters and Spiritual Directors, but he cannot satisfy his conscience with a purely *laissez faire* attitude. He must support these Directors by word and example and give them every possible aid and encouragement in their arduous task. In his conferences with Lectors and students he should not neglect to inculcate the necessity of the spiritual life for a well developed character and a true priestly personality. Unless all the teachers co-operate in the spiritual formation of the students, the efforts of the Masters and Spiritual Directors will produce little fruit of lasting quality. A Lector who does not give a good example of religious observance, or who in any way weakens the influence of the Masters, should be reported to the Provincial and proposed for a change of occupation, unless a timely admonition gives a well-founded hope of genuine amendment.

Intellectual Training

The intellectual education of the students will make many demands upon the thought, time, and patience of the Prefect of Studies. A detailed discussion of this matter does not belong to the nature of this paper, but a few guiding principles will not be irrelevant. A student's scholastic achievement must always be considered relative to the end and purpose of Franciscan life and to his own capacity. It would be contrary to the spirit and the example of St. Francis and the time-honored traditions of the Order to attempt to shape all our students in one and the same mould. There is a great variety of work in the Order and it can easily be adapted to the many individual differences found among our students. Our main interest must ever remain to train efficient religious priests for the spread of Christ's kingdom on earth and

[55] *Ibid.*, p. 31.

[56] Cap. XIII, n. 98.

the salvation of souls. Careers, degrees, and specialties are for the few talented students who should be made to employ their gifts to the best of their abilities, but they are always secondary to the primary purpose of the Order. Experience proves that the student with mediocre capacities but of solid character usually accomplishes more for the Church and the Order than the bright young man who is wanting in the qualities of an exemplary religious.

The authors of the *Schema Statutorum* had all this in mind when they suggested two classes of schools for the Province and worked out a complete plan of their organization.[57]

Lectors

The duties of the Prefect extend not only to the students but also to the Lectors in all things relating to studies. He must supervise their work and, if necessary, urge them to fulfill their office with greatest interest and diligence. It is particularly incumbent upon him to be watchful lest perhaps the Lectors occupy themselves with other charges, even of a sacred character, to the detriment of the school. If such be found, he must admonish them to attend to their assigned task, and even report them to the Provincial if his admonition proves futile.[58] The *Schema Statutorum* manifests great solicitude for complete attention to class work when it exempts the Lectors from the public recitation of the divine office under certain circumstances and from Church service. Without a special dispensation from the Minister General the Lectors were not to be guardians, Secretaries, Preachers, Confessors for the week, or to occupy themselves with any other kind of work not easily compatible with their lectures.[59]

[57] Cap. I, n. 1, *Acta Ord.*, XVII (1898), 111: Conventus Studiorum in Ordine nostro duplicis sunt classis: in Conventibus primae classis illi juvenes degunt, qui expleto cursu ex legibus praescripto alicui facultati perfectiorem dant operam: in Conventibus vero secundae classis ii aluntur juvenes, qui literas et scientias, absoluto novitiatu, excolunt, prout viros in sortem Domini vocatos decet ad obtinendum sacrum ministerium. Cf. *Acta Ord.*, XVII (1898), 164-166; 175-181; 192-197; 205-208.

[58] *Statuta*, Cap. XIII, n. 99: Officium Praefecti studiorum non solum in alumnos sed in Lectores quoad universam rem scholarem se protendit: ipsius ergo est curare, et, ubi opus fuerit, urgere ut Lectores munus sibi commissum, efformandi nempe optimos et sapientes dispensatores Mysteriorum Dei, maximo amore simul et studio adimpleant. Consequenter ad Praefectum spectat singulari ratione invigilare ne, fortasse, Lectores aliis—etsi ministerii sacri—officiis se immisceant in praejudicium scholae, eos monere et, si incassum monitio cesserit, rem deferre ad Ministrum provincialem.

[59] Cap. XI, n. 61, *Acta Ord.*, XVIII (1899), 44.

Our General Constitutions likewise insist on undivided attention to studies on the part of Lectors and students.

> 260. During the study-time or school time, the local Superiors are not allowed to impose special charges or work on the Lectors or Students which would withdraw them from their studies or impede their attendance at school.

The studies are considered so important that the *Statuta* permit the Minister General, and in particular cases other Superiors as well, to exempt with prudence students from some community exercise, even from choir, especially from the midnight office, whenever this seems to be necessary.[60]

Irrelevant Work

Thus the letter and the spirit of the law is clear. Experience teaches that all outside work during the school year diminishes the efficiency of a Lector as a teacher and redounds to the detriment of students and of studies. High standards can be attained and maintained only if the Lectors really devote themselves exclusively to their task. They need all the free time at their disposal for the proper preparation for class and for their own self-improvement. They must keep abreast of the times in their respective subjects. Nothing tends more to stifle ambition for study and stunt proficiency in the classroom in a young Lector than lack of time and opportunity because of irrelevant occupations. Superiors are not above the law, and therefore it might become the unpleasant duty of the Prefect of Studies to urge its observance. The success of his endeavors will depend upon the sustaining action of higher Superiors. No one is excluded from that co-operation for which the *Statuta* (Cap. I, n. 7) call: "Attamen omnes conspirent in efformandos probos atque doctos dispensatores Mysteriorum Dei." A shortage of men may be urged in excuse of a contrary practice. Superiors are often hard pressed for priests in their praiseworthy attempt to answer the many calls for assistance in the sacred ministry. The only remedy for this condition is the assignment of more men as *excurrentes* or *cooperatores* to those houses of study upon which heavy demands for help are made. On the other hand a Lector may welcome an occasional "apostolic journey"

[60] Cap. VII, 48: Minister generalis, et in casibus particularibus alii quoque Superiores, possunt pro sua prudentia studentes a non-nullis actibus communitatis, etiam a choro, praesertim nocturnis horis, eximere, quoties id studiis excolendis necessarium videatur (can. 589, 2).

for the sake of an opportunity of exercising his priestly functions and of enjoying a little salutary change. If the occasional does not become habitual, no prejudice to school work need be feared.

The Prefect of Studies has the right to appear unannounced in the classroom during the lecture period. He is cautioned to make use of this right with prudence. He may, moreover, at times call the individual students for an interview, either to admonish them, if necessary, or to inquire about the studies or other matters useful for him to know.[61]

Inspection

We can easily read the supervisory functions of the Prefect into these duties. Their primary purpose is inspection; to find out the state of affairs, to see if the *Statuta* are being observed, and to make certain that Lectors and students are faithful to their obligations. Supervision of instruction, which is here implied, demands more than mere inspection. It would lead me too far afield to enter into the details of supervision, but a few suggestions may call attention to the possible development of the office of Prefect of Studies.

Supervision

The essential activities of supervision are to help the teacher in interpreting the course of study and in making him familiar with it; to hold not so much critical as constructive conferences with the teachers individually and in groups; to suggest, supervise, and assist in necessary changes of classroom procedure; to accustom the teachers to think of their task in terms of student achievement, and to make them acquainted with the understanding, correct applications, and interpretations of the latest methods of measuring this achievement; to help teachers in the analysis of their work, their defects, and in directing professional reading, study, and steady improvement; to set the general and specific aims in the various branches; to offer assistance in the solution of teaching problems; in a word, to be an inspiring leader and guide.[62]

If a teaching position is vacant, or if a Lector is unable to continue his work, the Prefect of Studies shall promote the appoint-

[61] *Statuta*, Cap. XIII, n. 100: Praefecto studiorum est insuper ius, prudenter tamen exercendum, comparendi extemplo in scholis dum praelectiones habentur, necnon ad se interdum advocandi singillatim alumnos, sive pro monitionibus—si opus fuerit—sive etiam ut perquirat de studiis vel aliis, quae ad sciendum ipsi utilis videantur.

[62] Cf. Francis J. Bredestege, "The Superintendent and the Problem of Supervision of Instruction," *National Catholic Educational Bulletin*, XXVIII (November, 1931), 550.

ment of another to fill the vacancy or replace the incapacitated teacher. The Prefect must likewise replace in person or through some one else any Lector who is temporarily hindered from meeting his classes because of illness or for any other reason.[63] To promote the appointment of a Lector means more than merely informing the Provincial of the need of a teacher. It certainly implies the right of suggesting a suitable candidate. The progress of our studies depends largely upon good teachers, and these are not born but made. The *Statuta* (Cap. XI, nn. 71-90) outline an excellent plan of training for the future Lectors of a Province. The Prefects ought to insist that this plan be followed as far as is possible. If our young men with talent and an inclination to teach are carefully selected and prepared, there will be no dearth of able Lectors whenever a new choice must be made. There will be little danger of having too many well prepared Lectors on hand at any time. Even if our schools do not absorb the supply, there remain many other fields of useful labor in which they can be engaged until the time when they may be needed in the classroom. On the other hand it is unwise to put an unprepared man into the school, for such action retards the progress of studies and handicaps students, not to speak of the detrimental effect on the teacher himself. Talent and inclination are not infallible signs of teaching ability, and therefore the prospective candidates should first be tried out in the classroom under proper supervision.

Teacher Training

Before the opening of school, with the consent of the Provincial, the Prefect shall visit the various houses of studies and call the Lectors for a conference. Similar conferences may be held occasionally during the school year. The Prefect has the right to convoke these meetings and it is but proper that he advise the Lectors in due time regarding the topics to be discussed.[64]

Teachers' Conferences

[63] *Statuta*, Cap. XIII, n. 101: Deficiente aliquo ex Lectoribus, Praefecti est designationem alius apud Ministrum provincialem promovere. Si vero durante anno scholari aliquis ex Lectoribus, infirmitate vel alia de causa, docere praeditus fuerit, Praefectus per se vel per alium vices eius suppleat.

[64] *Statuta*, Cap. XIII, n. 102: Curabit Praefectus ante initium anni scholaris adire de consensu Ministri provincialis domus studiorum et Lectores cuiusque studii convocare, ut cum illis conferat de universa re scholari. Huiusmodi conventus haberi etiam possunt interdum per annum scholarem. Convocatio spectat ad Praefectum, quem decet praemonere Lectores de rebus maioris momenti in huiusmodi congressibus pertractandis, ut in harum rerum studium incumbant.

The commentators of the *Schema Statutorum* give a very cogent reason for these conferences, when they assert that there can be no formal unity of studies where several disciplines are taught unless the Lectors come to some agreement among themselves. They call attention to a difficulty which commonly arises in schools with departmental teaching. One Lector demands so much of his students in his own branch that they are unable to complete the assignments of the other Lectors, or can do so only with great difficulty. A judicious selection of subject matter must be made by each Lector. The necessary must be stressed, the less important items are to be left to the private reading of the students, whereas some things are to be omitted by one Lector entirely because they will be treated in full by another. Now this selection and correlation of matter is impossible without mutual understanding among the Lectors.[65]

Many topics suggest themselves for these conferences, besides the one referred to by the authors of the *Statuta*. Such matters as textbooks, libraries, periodicals, apparatus, discipline, methods, hour plan, student problems, scholastic and spiritual progress of the students, professional advancement of the Lectors, recommendations for the good of the school, etc. might be mentioned. To be productive of definite results, these conferences must be conducted orderly and according to some plan. The subjects of discussion should be presented to the Lectors in advance and a timely paper on some special topic ought to be read. Brief minutes of the proceedings will be necessary, not only as a matter of record, but also for future reference in checking up results and to avoid useless overlapping.

Regional Conferences

The *Statuta* specially recommend conventions of delegates from adjoining Provinces, and even of entire regions, for the purpose of promoting studies in our Order.[66] This is interesting in view of our own Franciscan Educational Conferences which have set an example to our European confreres, and at the same time serves to keep alive in our minds the primary purpose of these gatherings, namely, the promotion of studies in the Order, not only regarding content but also form. No matter how long we are

[65] Ad Cap. XI, n. 69, *Acta Ord.*, XVIII (1899), 46.

[66] Cap. XIII, n. 108: Hisce statutis commendamus conventus interdum habendos inter delegatos finitimarum Provinciarum vel etiam totius regionis, causa promovendi studia in Ordine nostro.

actively engaged in the classroom and are teaching the same subject, we can always learn new ideas, methods, procedures, ways and means of accomplishing better results. As Lectors we have common tasks and common problems. A frank exchange of views solely to learn what is best under the circumstances in which we are obliged to labor, and the encouragement that comes from contact with other enthusiastic and successful educators, will go far to keep the Lector from getting into that pedagogical rut which is the death of interest and the end of all progress.

Scholastic Calendar

After having consulted the respective Lectors, the Prefect is to prepare the annual scholastic calendar, in which the matter to be taught in each branch, the days and hours of class are to be described. Once this calendar has been made, it cannot be changed without the permission of the Prefect.[67]

The commentators of the *Schema Statutorum* remind their readers that the necessity of this calendar has been recognized in the Order as early as the 18th century, when the Minister General issued a list of questions in the individual branches of the various disciplines for the entire Order. Since the French Revolution this universal calendar was discontinued for some unknown reason. Emphasis upon the necessary matter to the exclusion of the less useful is also found here. The necessity of the calendar is based upon the following reasons: (a) That the Lectors may know beforehand how many lectures are to be given and what arguments are to be prepared; (b) that the students may know what matter is to be treated in the classroom and in the examinations; (c) that the order of studies may be preserved and the Lectors be kept within prescribed limits of content and of time.[68]

Modern educational practice insists on well prepared study plans for each class period, and not only on descriptive catalogues and syllabi of courses. It is not sufficient to determine beforehand the specific matter to be taught, the day and the hour of instruction, but definite aims and objectives for each assignment are demanded of the teacher. There is very much in modern

[67] *Statuta*, Cap. XIII, n. 103: Tenetur Praefectus conficere quotannis *kalendarium scholare*, in quo describabur *materia* tradenda in unaquaque disciplina cuiusque studii, *dies* prae lectionum simul et *hora*. Ad hoc sunt audiendi Lectores, quorum interest; at semel constitutum kalendarium scholare, sine venia Praefecti non potest immutari.

[68] *Acta Ord.*, XVIII (1899), 27-28.

educational literature on the theory and practice of sound pedagogy which we can safely adopt in our own classrooms. The scholastic calendar should point out the principal aims of each lecture or instruction. The knowledge of these definite goals will enable the teacher and the students to sidestep much irrelevant material and help to fix the all-important points upon the mind.

Absentations from Class

Only the Prefect or the Vice-Prefect of Studies may grant a leave of absence from school in individual cases for a grave cause. It is to be given only rarely, and then the Lector from whose class a student absents himself is to be duly notified of the permission.[69]

This regulation presupposes the presence of the Prefect in the house of studies. If there are several houses of studies in a Province, a Vice-Prefect is taken for granted in each one of them. Our present-day educational institutions carefully check all absences from class. The schools of the Order present little difficulty in this matter, but order requires that some one official be responsible for these absentations, and the *Statuta* designate the logical person.

Annual Reports

At the end of the school year the Prefect must send an accurate report of the progress in studies made by each student to the Minister Provincial. He must also give a faithful account of the observance of the *Statuta* to the Minister General each year and make known to him those students who possess special talent and aptitude for some particular branch of study. A copy of this account must be given to the Provincial.[70]

The Prefect of Studies is the immediate agent of the Provincial in the matter of Studies. It is evident therefore that he must keep the Provincial informed about everything that pertains to the educational field in the Province. The Provincial should

[69] *Statuta*, Cap. XIII, n. 104: Abstentias a schola, nonnisi raro, gavi de causa et per modum actus permittendas, unus concedere valet Praefectus aut Vicepraefectus. Licentia tamen habita notificanda est Lectori, a cuius schola aliquis absens fit.

[69] *Statuta*, Cap. XIII, n. 104: Absentias a schola, nonnisi raro, gravi de causa scholaris ad Ministrum provincialem accuratam relationem de profectu in studiis singulorum studentium. Ad Ministrum generalem quotannis fideliter referat de observantia horum Statutorum in Provincia, indicatis quoque studentibus, qui pollent eminenti ingenio et aptitudine pro aliqua disciplina. Huius relationis copia tradatur Ministro provinciali.

know how each Lector is performing his duties, and what progress each student is making. Scholastic achievement, good character, and regular religious observance are the only criterion that we have of a student's future success. It is most important that the Prefect of Studies bring to the knowledge of the Provincial everything that may assist him in forming a correct judgment regarding the worthiness of the students to advance to a higher course of studies or to be promoted to solemn profession or sacred orders.

Father General has a right to know how the rules for studies are being observed in the various Provinces of the Order. The simplest and most effective means of obtaining all necessary knowledge in this respect is the annual report of the Prefect of Studies. The very fact that such a report must be made each year is no small incentive to endeavor to carry out the prescriptions of the *Statuta.*

Pointing out the students gifted with more than ordinary talent and aptitude for some special study may serve the Minister General in good stead on some future occasion when the highest authorities of the Order are in search of men for some particular kind of work for the common good of the entire fraternity. Such students may be suggested for a post-graduate course in our International College in Rome or in some Catholic University where they would be trained for teaching or for some field of research.

Archives and Files

Archives shall be kept in the houses of studies for the preservation of all documents and acts pertaining to the studies of the Province. Each house of studies shall have its own register containing the personal and moral status of each student for each year of his attendance, together with the marks which he received in the various branches. A chronicle of all important events shall also be found in the convent of Lectors.[71]

These archives with well kept records are indispensable for the proper administration of any institution of learning. Our scholastic files ought to be arranged according to the best modern methods and contain all requisite data in such manner that any single

[71] *Statuta,* Cap. XIII, n. 106: In domibus, in quibus habentur studia, habeatur pariter archivum studiorum, in quo omnia documenta et acta studiorum Provinciae asserventur. Unumquodque studium habeat suum regestum, in quo status personalis et moralis alumnorum singulis annis describatur una cum examinis notis pro alumnorum exitu. Habeatur item regestum, in quo describantur illa potiora momenti, quae in conventibus Lectorum pertractata fuerint.

item can be located without delay. A card file is the most serviceable. The system used should be uniform in all houses of studies of the same Province. All cards ought to be at least duplicated; one card for the house of studies and the other for the files of the Prefect. The Prefect should have a complete record of the scholastic achievement of each student, from the high school or Seraphic Seminary to the course in Sacred Eloquence. His files will not be perfect unless they also contain the transcripts of credits obtained or the work done in schools other than those of the Order. The Prefect should likewise have a record of all credits, certificates, diplomas, and degrees of the Lectors or other Fathers who are not actually teaching. Needless to say, the annual scholastic calendars, changes in the curriculum, adoption of new textbooks, transfers of Lectors, documents or accrediting or incorporation, etc., should find a safe place for ready reference in the office of the Prefect of Studies.

Conclusion

This exposition of the office of Prefect of Studies is by no means exhaustive, but it forces us to admire the wisdom of the highest authorities in our Order and the practical mind of the authors of the *Statuta*. High standards and continued progress in studies will depend to no small extent upon the functioning of the Prefect of Studies. Their office is indeed a one man's job in the sense that it will require all their time and attention; and again it is not a one man's job, because it calls for the wholehearted co-operation of Superiors, Lectors, and students. The Prefects of Studies will never accomplish the burdensome task assigned to them by natural means alone; they need the light and the strength of the grace of God. I therefore suggest that St. Anthony of Padua, the first Lector of the Order in the opinion of good authorities, be chosen as the special heavenly patron of the Prefects of Studies. Of him we read in the office of his feast (Lectio V):

> Primus ex suo Ordine, ob doctrinae praestantiam, Bononiae et alibi sacras literas est interpretatus, *Fratrumque suorum studiis praefuit*, obtenta ad id muneris ab ipso sancto institutore Francisco in scriptis facultate. [Italics are mine.]

I shall bring this paper to a close with the concluding words of the *Epilogus Schematis Statutorum pro Studiis Regendis in O.F.M.:*

> . . . omnesque, pro suo quisque amore in Ordinem, adniti debemus, ut

seraphica juventus arma sibi comparare valeat pro tuendis et proferendis finibus regni D. N. Jesu Christi, cui honor et gloria in saecula saeculorum. Amen.[72]

DISCUSSION

FR. EMIL BRUM, O.F.M.:—The Friar educators who drew up the *Statuta* kept in mind the fact that the students of our houses of study are not all of the same mental capacity. They likewise took into consideration the variety of the work which the priesthood in the Order affords. Hence the *Statuta* do not make the same rigid demands of all our students. Nevertheless, because the priest is a professional man, a certain minimum of learning is and must be expected of him. There must be some standard which all must attain.

Wise Discrimination

Those men, guided by years of experience in teaching and study, pointed out the relative importance of the various branches in the curriculum and emphasized the fact that some branches are of greater importance than others. This distinction should be fully grasped by both teacher and pupil. It should be made clear to all the students, particularly, to the mediocre, which branches are more important and therefore must be studied thoroughly, and which are not so important but still deserving of the student's honest effort to acquire a good knowledge of them.

Some students are handicapped in their efforts to reach the required standard because the teacher when making assignments fails at times to make sufficient allowances for the individual differences in students, or because the teacher overstresses the branch he teaches, whether it be a major or a minor. Difficulties between teachers and between teachers and pupils can and do arise on this score. In their meetings teachers should discuss and iron out such difficulties. The Prefect of Studies or the Vice-Prefect should decide the cases if necessary and then for the sake of harmony and in order to reach the desired end of the curriculum those concerned should abide by the decision given.

Correcting Pedagogical Errors

Every teacher should strive to give the students the correct view on the relation of the various branches in the course. Having studied those branches himself, it should be an easy matter for the teacher to give the students that well-rounded view which they should have. To appreciate more thoroughly the correlation between the branches, the teacher will do well to brush up periodically on the branches outside his special field. This practice will help much to bring about a more sympathetic-co-operation between the teachers themselves and between the teachers and pupils. It will remind the teacher of certain difficulties he encountered while trying to master some branch or other in his student-years; it will cause him to realize more and more the effort, patience and time required in teaching and in learning certain subjects. The more experience one has in the work of teaching, the more consideration will he be inclined to show to others engaged in the same task and to the pupils. An occasional perusal of the text-books on other subjects will put a desired check on the over-enthusiasm of the specialist for his branch. The goal, the purpose of the curriculum furnishes the teacher with a guide for his methods and course of action in teaching.

Suggestions for Teachers

The unity of the course makes it easy and natural for the teacher to point

[72] *Acta Ord.*, XVIII (1899), 160.

out the correlation of the various subjects. For instance, in the college course for the Clerics, the Lectors of language, of literature, of the natural sciences, can indicate the points of contact between those branches. The teacher of science can call attention to philosophical principles which underly the various sciences and can also refer to some philosophical theories based on or having references to those sciences. The language teacher has occasion at times to bring out points on the philosophy of speech and thought; the teacher of literature has many opportunities of pointing out the different kinds of philosophy contained in the various works of the authors and of marking the contrast between scholastic and non-scholastic thought. And if the Lector of philosophy is well-versed in the natural sciences and in literature he will be better fitted out to create interest in his branch. In this way the student will gradually acquire the notion that there is such a thing as the unity of truth and that harmony between all branches of learning does exist. This reminds me of a recent experience. I suggested to one who had a university course in chemistry and bacteriology in one of our big state schools, that she read Sheen's: *Life of all Living.* She returned some time later to tell how interesting and enlightening she had found that little book. That was the first time she had read anything showing in such a simple way the relation between the natural sciences and certain dogmas of the Catholic faith. A number of passages taken from that same little book proved highly interesting to the Clerics in the Ontology course. It brings out in an interesting way the truth that the perfection of all things and therefore of the universal order, natural and supernatural, consists above all in unity.

Correlation of Study

The *Statuta* emphasize the relation between *doctrina* and *sanctitas.* A combination of the two is the aim of Franciscan education. Hence the Friar teacher will always be on the alert to drive home the spiritual import of certain phases of his subjects. There are times when certain inferences regarding the spiritual life can be very appropriately drawn from the subject-matter at hand. Points which the spiritual director may have treated of previously in his ascetical talks will often hit home more squarely when referred to in the course of certain treatises in the secular branches. The Lector of general metaphysics, for example, has a splendid opportunity of indicating the rational, metaphysical basis for religion and therefore for the spiritual life. The notions of *ens, verum, bonum,* dry as a rule to young philosophers, take on real meaning and practical value when it is pointed out to them how Dr. Sheen treats them in his *Religion Without God.* In the last chapter of that book the author shows how those metaphysical notions furnish the philosophical basis of religion and therefore of asceticism. If the young Friar is once convinced that in being spiritual he is acting according to right reason, his spiritual life will have a firm and solid foundation. All of us realize how necessary it is today that a man's spiritual life be based on conviction.

Promoting the Spiritual in Education

FR. EMIL BRUM, O.F.M.:—In reference to the Prefect of Studies I cannot refrain from calling attention to the fact that the great teaching Orders of the thirteenth century, the Dominicans and Franciscans, were keenly aware of the importance of placing capable men at the head of their schools. This fact is brought out very forcibly by Fr. Schwertner, O.P., in his recent *Life of St. Albert the Great.* The author outlines the various duties of the Saint in conducting the Studium at Cologne. He likewise points out that in those days the highest superiors in the Order were eager for and intent on having an efficient educational system. The chapter at Valenciennes in June 1295,

The Voice of History

appointed a commission of five of the most progressive professors in the Order to draw up such a system. To assure the proper results the commission insisted upon freedom of teaching; hence the professors were not to be occupied with tasks that would interfere with their work in the classroom. It insisted too on high standards for both professors and students and recommended strongly the attendance of separate schools for the study of special branches. Fr. Schwertner paints an interesting picture of a Dominican school in the golden age of scholasticism and relates how all the members of the community had to take an active part in the studies pursued there. Study was considered to be of such high importance that, as the author says: "to promote study and preaching the sacred offices in choir were to be conducted with a certain holy alacrity and expedition." (cf. *op. cit.*, pp. 94-100.)

REPORT OF THE COMMITTEE ON RESOLUTIONS

The Committee on Resolutions of the Fifteenth Annual Meeting of the Franciscan Educational Conference begs leave to submit the following resolutions:

1. To Pope Pius XI, our Holy Father, the Conference renews its pledge of loyalty and reverence.

2. To the Most Reverend Ministers General of the three families of the Seraphic Order we offer our grateful appreciation for their continued interest and good will toward the work of the Conference.

3. To the Very Reverend Superiors of the Provinces affiliated with the Conference also, we extend our deep feelings of respect and gratitude for their paternal solicitude and interest in the Conference.

4. To the Very Reverend Benno Aichinger, Provincial of the Province of St. Joseph, Mt. Calvary, Wisconsin, to the Very Reverend Pacificus Raith, O.M.Cap., Guardian of St. Anthony's Monastery, Marathon, Wis., to all the members of this community, Fathers, Clerics, and Brothers, we wish to express our sincere thanks for their genuine cordiality and hospitality.

5. Since educators must necessarily have access to the latest contributions of Catholic writers who treat of modern trends of philosophy and educational psychology, the *Catholic Periodical Index*,[1] which indexes the current issues of fifty outstanding English Catholic periodicals, including the Report of the Franciscan Educational Conference, is earnestly recommended to the attention of the Friars.

6. In order that the work done by the Conference during the past years may serve as a basis for further activity, it is recommended that a cumulative index of the fifteen reports of the Conference be published.

7. In view of the wealth of information contained in the numerous volumes of the *Annales Fratrum Minorum* and the *Analecta Ordinis Minorum Capuccinorum* and the *Commentarium Ordinis Fratrum Minorum Conventualium*, be it resolved that a respectful request be sent by the Conference to the General Superiors in Rome that a cumulative index of the first fifty volumes of these official publications be published.

8. To promote the welfare of the Conference we ask the Fathers Provincial to encourage as many of their lectors and teachers as possible to attend the annual meetings.

9. This Conference indorses a resolution similar to that of the Twelfth Annual Meeting, 1930, namely, that the professors be accorded the freedom to subscribe for current philosophical and scientific periodicals, including those of non-Catholic editorship, and to become members

[1] Published for the Catholic Library Association by H. W. Wilson Co., 950 University Ave., New York, N. Y.

of educational, philosophical, and scientific associations. Moreover, our Friars are requested to attend national and regional meetings of the various associations.

10. The Conference urges the Friars to spread the knowledge of Catholic philosophy of life by writing popular pamphlets and by an extensive use of the radio.

11. In view of the movement to have St. Anthony declared a Doctor of the Church the Conference goes on record in requesting the Holy See, through our Postulator, to confer this title on St. Anthony, the first lector of the Order.

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